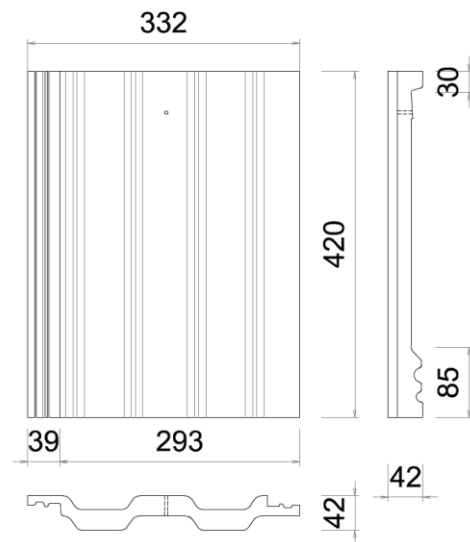
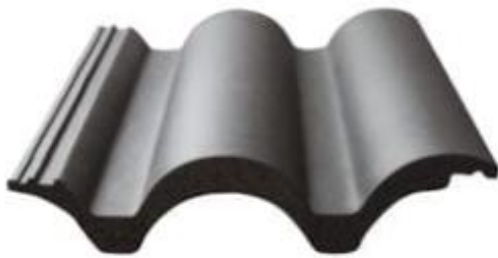


Marley Monarch Interlocking Tile

An exceptionally strong classic bold roll tile that is well suited to Modern Balinese and Mediterranean architectural styles.



PRODUCT DESCRIPTION:

The Monarch is Marley's boldest, strongest and most successful concrete roof tile in Southern Africa. Winner of top CMA Awards for excellence in 1998, 2000, and 2002.

ADVANTAGES (FEATURES & BENEFITS):

- > Extra-strong high performance bold-roll
- > Highly cost effective alternative to the traditional "under-and-over" clay tiles
- > A large choice of aesthetic colours and finishes
- > Also available in multicolour Designer Range

* Visit www.marleyroofing.co.za for more information & registering the guarantee

TECHNICAL DATA:

Size of Tile:	420 x 332mm
Minimum Pitch:	17,5° (100mm headlap) 26° (75mm headlap)
Maximum Pitch:	45° (Above maximum pitch consult Marley Roofing)
Minimum Headlap:	75mm (for pitch of 26° and above) 100mm (for pitch of 17,5° and 25°)
Maximum Gauge:	320mm (100mm headlap and at pitches between 17,5° and 26°) 345mm (75mm headlap and at pitches of 26° and above)
Cover Width:	301mm (nominal at lock mid shuffle position)
Hanging Length:	392mm (nominal)
Covering Capacity:	10,48 tiles/m ² (net) at 100mm headlap 9,63 tiles/m ² (net) at 75mm headlap
Weight of Tiling:	+ - 51,9kg/m ² at 100mm headlap + - 48,2kg/m ² at 75mm headlap
Battens Required:	3,13 lin.m/m ² at 100mm headlap 2,9 lin.m/m ² at 75mm headlap

Batten Size Recommended:

- 38 x 38mm for rafters/supports not exceeding 760mm centres
- 38 x 50mm (batten fixed flat) for rafters/supports not exceeding 900mm centres
- 38 x 50mm (batten on edge) for rafters/supports not exceeding 1 000mm centres

Note: Above 760mm the rafter spacing can be increased only with engineer-designed trusses and with 38 x 50mm batten of the correct grade. All structural timber must comply with S.A National Standards.

Tile Nails: 90mm (210 per kg) ± Corrosion-resistant tile fixing nails

Additional Notes:

- **Marley Radiant Barrier is compulsory for pitches below 26 degrees in all cases and Radiant Barrier or Undertile Membrane is compulsory for any pitch above 26 degrees and in all cases.**
- Ensure that all battening is in an absolute level plane.
- In exposed areas the tile headlap may be increased, however, increased headlap is not as effective as a steeper pitch.
- Due to natural variations in the raw materials and the occasional occurrence of efflorescence on concrete products, absolute colour uniformity on the roof cannot be guaranteed with Standard Through colour tiles.

All tiling and fixing to comply with SANS 10062 and 10400L code of practice

STORAGE & HANDLING:

Marley Roofing as well as our customers are responsible for ensuring that a quality product is delivered in a good and acceptable condition to the end consumer.

We therefore advise our customers to apply and follow the best practices laid out below in terms of Storage & Handling of Marley Concrete Tiles, to avoid deterioration in quality and appearance of the surface of the tile and to avoid general problems such as breakage and to minimise wastage.

> Receiving of stock – what to check

- Marley Roofing concrete products are delivered palletised, banded and stretch wrapped, to stockists by fleet of modern transport with mechanical off-loading facilities.
- Please advise customers to check and ensure that stock received is in an acceptable order - packaged on pallets, banded and stretch wrapped and indicate all breakages and shortages on the delivery note.
- Please contact Marley Roofing's Customer Care at 010 600 0284 to report any discrepancies or defective products within 5 working days.

> Handling and Storage of stock in the yard

- Pallets should be transported using appropriate lifting machinery, i.e. fork lift.
- Unload and handle tiles and fittings with care to avoid damage, soiling and breakage.
- Avoid loading pallets onto scaffolding unless a safe access platform has been provided.
- Pallets should be stored on a smooth, level base capable of supporting their weight.

- Do not stack tiles more than 3 pallets high in stockyards.
- If palletised stock's stretch wrapping is removed to split stock for whatever reason, please ensure that remaining stock is securely packed/stacked, preferably in the same way it was delivered.
- To prevent or minimise uneven soiling of tiles within the yard, it is recommended to order stock with a minimum holding time of 30 days, as longer periods of pollution exposure may cause extreme uneven soiling.

> Handling and Storage of stock on site

- Tiles should be stored in a safe location and should be kept protected from damage on site.
- Do not stack tiles more than a single pallet on site.
- If palletised stock's stretch wrapping is removed to split stock for whatever reason, please ensure that remaining stock is securely packed/stacked, preferably in the same way it was delivered.
- Installers should take care when handling and carrying tiles to prevent unnecessary scuffing and breakages.
- Any roof or vertical work in tiling should be treated as fragile and never used as a working platform.
- Ideally roof installation should be carried out after all other trades have been completed e.g. parapet wall plastering and painting.
- We recommend that an adequate number of crawling boards and ladders should be used for gaining access over completed areas of roof tiling, and should be designed for the purpose, be of good construction and strong enough to enable planned work to be carried out.
- In all work to be carried out ensure that all legal safety requirements are met as per local regulations.

> Soiling due to installation:

- Please ensure when mixing mortar for fitting accessories application that the mixture contains adequate water to give a firm structure, without leaching excessive water that can cause soiling of installed tiles.
- All mechanical cutting of tiles for hips, valleys and parapets walls must be done on site and not on the roof to prevent dust settlement.
- For more on Marley Roofing's General Terms and Conditions, please visit www.marleyroofing.co.za

INSTALLATION GUIDELINE:**> General**

The following recommendations on fixing shall be regarded as normal practice. Under certain circumstances material and fixing specifications may vary to comply with local requirements.

> Underlay

Prior to battening, and where applicable, a high quality certified underlay shall be laid horizontally over the rafters, with minimum overlap of 150mm and secured with clout nails to the rafter. The underlay must be taut at eaves to allow drainage of water. At closed eaves the underlay shall extend over the tilting batten or fascia board into the gutter. At open eaves the underlay shall extend +/- 20mm over the beamfilling of the exterior wall.

At hips a vertical strip of underlay not less than 600mm wide shall be laid over the underlay of the main roof. At valleys a similar strip not less than 600mm shall be installed under the underlay of the main roof.

> Battens

Battens shall be graded S.A Pine complying with SABS 653-1980 Standard Specification for Softwood Brandering and Battens.

The minimum batten sizes are:

38 x 38mm	for rafter centres up to	760mm
38 x 50mm	fixed flat for rafter centres from	760mm to 900mm
38 x 50mm	fixed on edge for rafter centres from	900mm to 1000mm

All structural timber to comply with SABS 563-1978 Standard Specification for Stress-graded Softwood Structural Timber. Above 760mm the rafter centres can be increased only with engineer-designed trusses.

Battens shall be of sufficient length to be supported at each end and intermediately by at least three rafters, trusses or walls. Counterbattens shall be installed at valleys and hips to support the cut ends of the tiling battens.

Verge counterbattens at gable ends shall in all instances be 38 x 50mm fitted on edge to the ends of the tiling battens.

At steep pitches above 45° and vertical hips additional battens shall be fixed on top of the hip rafter to form a hip tree of sufficient height to permit the mechanical fixing of hip tiles.

At the ridge the top tiling battens shall be placed at a distance not exceeding 25mm from the rafter apex to ensure sufficient overlap of the ridges tiles over the top course of tiling.

The first tiling batten at eaves shall be positioned at a distance which allows sufficient overhang of the tiles over the fascia board or tilting batten in order to ensure that water discharges into the centre of the gutter.

Battening on boarded roofs with underlay shall be supported on counterbattens to increase ventilation under the tiles and to allow free drainage of any water that may reach the underlay.

> **Concrete Roof Tiles**

Marley Interlocking Concrete Tiles, nominal size 420 x 332mm, shall comply with the requirements of SABS 542 Standard Specification of Concrete Roof Tiles. In addition, all tiles shall have weather bars on the underside, forming an effective weather check against wind-driven rain.

The tile profile, colour and finish shall be agreed between the specifier and the customer.

Where acrylic coated tiles are specified the tiles shall be factory-coated with an M22 or M11 pure acrylic polymer coating having proven resistance against alkalinity, acid-rain and U.V. radiation. The special M22 and M11 formulations inhibits the growth of algae and fungi on the roof.

> **Tiling**

All tiling shall comply with SABS 062 Code of Practice of Fixing of Concrete Roof Tiles and shall comply with the manufacturer's recommendations applicable to the locality, the roof pitch and for special precautions where required. All mechanical fixing shall be done with non-corrodible nails or clips. Nails shall penetrate the battens to a minimum depth of 25mm.

Marley Monarch, Mendip, Double Roman, Double Roman Plus, Ludlow and Homestead tiles shall be laid straight-bond with the vertical joints forming a straight line on the roof slop. At roof pitches from 17,5° to 25° the tiles shall be laid with a minimum headlap of 100mm with underlay mandatory, and from 26° and above with a minimum headlap of 75mm.

The tile headlap can always be increased to suit the rafter length and to ensure that the top course of tiling under the ridge is a full tile. The first course of tiles at eaves shall overhang the fascia board or the tilting batten sufficiently to ensure an efficient discharge of rainwater into the gutter. The tiles shall be supported by a continuous

tilting batten or fascia board to ensure that the first eaves course neither tilts nor droops in relation to the main roof plane.

At all abutments where the tiling meets walls or chimneys an approved flashing material shall be used to weatherproof the junction. All tiles shall be close-cut to the abutment.

> Verges

Unless otherwise specified, verges shall be formed with Rake Verge Tiles fixed in accordance with the manufacturer's recommendations.

> Ridges

Taper ridge tiles shall overlap the top courses of tiles by at least 75mm and shall overlap one another by a minimum of 50mm. The ridge length can always be covered with full ridge tiles by increasing the overlap evenly. Ridge tiles shall be edge-bedded onto the top courses of tiles in accordance with the manufacturer's recommendations.

A strip of approved DPC 150mm wide shall be placed lengthwise under the ridge tiles, overlapping the top courses of tiles by 25mm. Lapped ends shall be supported underneath, and overlaps shall not be less than 150mm. Where ventilated ridges are installed an opening shall be cut in the underlay and the DPC to ensure effective ventilation.

End ridge tiles at gable ends shall be solid-bedded with mortar inset with broken tile filler pieces and neatly pointed at fair ends. Alternatively, terminal ridges shall be installed at gable ends.

Ridge tiles shall be neatly cut and mitred at junctions, e.g. hips, ridges etc.

Mono-ridges shall be covered with purpose-made monoridge tiles which shall be edge-bedded onto the top course of tiles and fixed in accordance with the manufacturer's recommendations.

> Hips

Hips shall be covered with overlapping ridge tiles. The adjacent tiling shall be cut closely to the rake of the hip and hip tiles shall be edge-bedded as described for ridge tiles. We do however strongly recommend the use of Marley Kro Clips to further secure cut tiles for hips and valleys to prevent slip-out of these tiles.

Purpose-made hip starters shall be used at the bottom of each hip.

At steep pitches above 45° and vertical hips hip irons shall be used, fixed to the hip tree with two non-corrodible nails or screws to support and secure the first hip tile. All other hip tiles shall be mechanically fixed to the hip tree in the overlap in addition to bedding.

> Valleys

A non-corrodible valley liner at least 300mm wide, preferably with a preformed centre gutter, must be installed before tiling commences. In the case of a closed valley the tiles on each side must be cut to obtain a straight butt-joint over the centre of the valley flashing. For an open valley the adjacent tiles on both sides must be cut to form an open channel at least 100mm wide. Tiles must be neatly cut to rake using a carborundum disc-cutter (see Health and Safety Instruction on cutting and drilling of tiles) and securely fixed to the battens and the valley shall be left clear and unobstructed.

> Fixing of Ridge and Hip Cut Tiles

We strongly recommend the use of Marley Kro Clips to secure cut tiles for hips and valleys to prevent slip-out of these tiles. Using the crow clip, press the cut hip/valley tile into the kro clip clamp and tap with a hammer to grip and secure the clamp onto the cut tile. The secured kro clip is then attached to the hip/valley batten/rafter by wrapping the attached wire around a secured nail that has been nailed to the hip batten.

> Mortar bedding

All bedding and pointing mortar used for hips and ridges should consist of 3 parts clean sharp plaster sand to 1 part Portland cement or masonry cement suitably tinted with inorganic pigment to blend in with tiling. The bedding mortar should be struck off and pointed in one operation to obtain a smooth finish. The bedding shall be cut off at right angles to the roof plane, neatly pointed and wet-brushed to achieve a smooth finish.

All tiles to be bedded shall be first soaked in water before bedding to ensure a good bond.

> Dry fixing solutions

Marley Dry Ridge Kits – the items within each kit is also available to purchase separately

> Inland Ridge Kit - for gable to gable roofs with no hips: 1 x 10m Ridge roll, 27 x Ridge tile clips (Terracotta or Slate), 14 x Ridge Tree brackets

- > Inland Ridge & Hip Kit – for roofs with hips: 1 x 10m Ridge roll, 27 x Ridge tile clips (Terracotta or Slate), 14 x Ridge Tree brackets, 30 x Crow Clips
- > Coastal Ridge Kit – for gable to gable roofs with no hips using the double batten ridge fixing method: 1 x 10m Ridge roll, 27 x Ridge tile clips (Terracotta or Slate)
- > Coastal Ridge & Hip Kit – for gable to gable roofs with hips using the double batten ridge fixing method: 1 x 10m Ridge roll, 27 x Ridge tile clips (Terracotta or Slate), 30 x Crow Clips

Recommended temperature of fixing – above 5°C.

Recommended storage – not exceeding 35° C

> Dry Ridge Installation Method

- 1.The surface of the roof tiles must be clean, dry, free of dust and grease.
- 2.Lay the Marley Under tile membrane or Radiant Barrier in the normal manner.
- 3.If ventilation is required set back 5-30mm on both sides from the apex to create air ventilation
- 4.Temporarily install top battens on either side of rafters/trusses apex to first and second rafter/truss 50mm from the apex.
- 5.Install three roof tiles to both top battens. Place the ridge tile on top of the roof tiles to gauge required height of ridge batten and ridge batten tree from top of apex. Temporarily hold the ridge batten tree 38mm from the underside of the ridge tile. Allow gap of 38mm for 38mm x 38mm ridge batten installation. Measure the distance between the apex and the underside of the ridge batten tree bracket. Generally, the gap between the rafter apex and bottom of the galvanised ridge tree is +- 60mm, subject to different tile profiles
- 6.Remove the top battens and install the first ridge batten tree by bending its legs to match the pitch of rafters/trusses. Secure with galvanised nails or screws through provided holes in ridge tree legs.
- 7.Repeat this process on the other gable end. Secure a taut gut line between both ridge batten trees to achieve correct height of intermediate ridge trees. Install all intermediate ridge batten trees to rafters/trusses apex with galvanised nails. Permanently replace the top battens to all rafters/trusses
- 8.Install the ridge batten into ridge batten trees with 30mm galvanised nails or screws into holes provided
- 9.Install all roof tiles or slates in accordance to Marley fixing specifications
- 10.Roll out ridge roll and centre up with ridge batten. Secure with small galvanised or stainless-steel nails/staples to ridge batten at 1-meter intervals

11. Peel off the protective tape from the butyl adhesive and press down to top side of roof tiles on both sides of the ridge. Carefully adjust the corrugated edges into the valley/water channels of the tiles/slates profile

12. Overlap ridge rolls by 50mm to prevent water ingress

13. Place the first ridge tile (the first tapered ridge tile requires a 20mm spacer under the trailing edge to compensate for lack of previous tile overlapping. This ensures a straight ridge line of ridge tiles. The same rule applies to Hip starters.

14. Secure each ridge tile with a ridge tile clip. Secure ridge tile clips in place with galvanised or stainless-steel screws to a depth of 25mm into the ridge batten. Secure every 4th ridge tile with a galvanised or stainless-steel appropriate length screw to a depth of 25mm into the ridge batten.

> **Dry Ridge for hips** – temporarily fix the ridge-tree brackets in spaces between battens onto the hip rafter. As per above method (points 5 and 6) - gauge the height of the ridge tree. Once height has been established, bend and secure permanently with nails. As per above (point 8), install the ridge batten into the Ridge Tree. Using the kro clip, press cut hip tiles into the crow clip clamp and tap with a hammer to grip and secure the clamp into the cut tile. The secured kro clip is then attached to the hip batten by wrapping the attached wire around a secured nail that has been nailed to the hip batten. Continue with instructions (9 to 14) to finish dry ridge hip installation.

> **Dry Ridge Double Batten System for Coastal Hip and Coastal Ridge Kits** – Secure a 38mm x 38mm batten directly onto each rafter/truss/hip rafter by nailing two 75mm wire nails – one from the top left and the other from the top right - diagonally across the top of the batten into each of the rafters/trusses. Place another 38mm x 38mm batten on top of the secured 38mm x 38mm ridge batten. As per above method, fix the upper top batten to the bottom ridge batten by nailing two 75mm wire nails diagonally across from the top of the batten into the bottom ridge batten. Continue with points 9 to 14 to complete dry ridge installation.

> **Technical advice**

For more information, please refer to Marley Roofing's Minimum Concrete Rooftile Fixing Specification or contact Marley's Technical Department - provides free advice on all technical roofing matters.

> **Availability**

Marley Monarch tiles are available in all regions and can be delivered in palletised form. For further information contact Marley Roofing.

The manufacturer reserves the right to change or discontinue any of the specifications or products without notification. All goods are subject to availability and the company's conditions of sale which are available on request.

CONTACT DETAILS:

Call: 010 600 0284

Email: info@marley.co.za

Web: www.marleyroofing.co.za or scan QR code below:



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