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# INSTALLATION GUIDELINES



## OVERVIEW

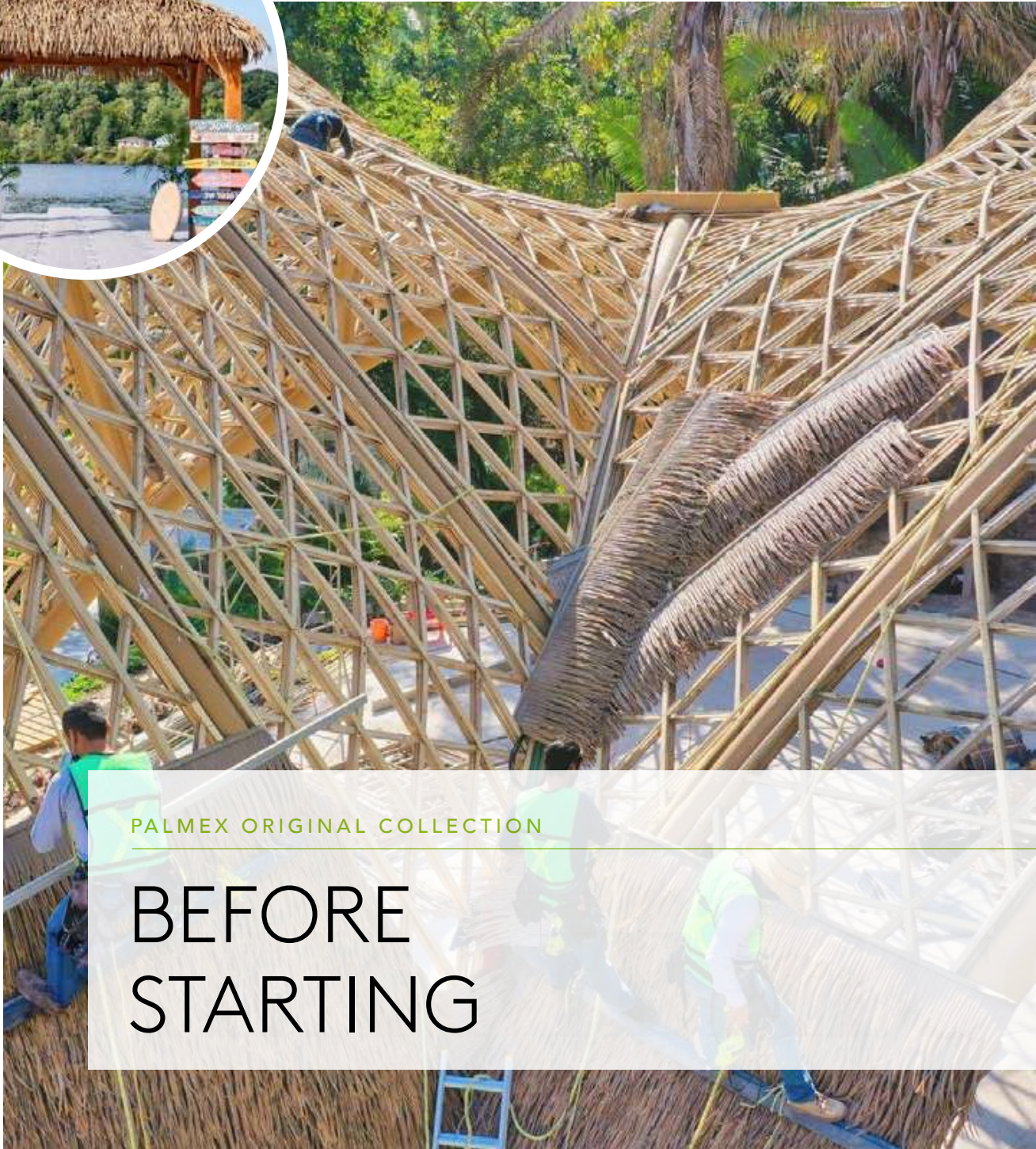
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## LEGEND

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Installation Steps	Demo	FYI	Option	Pro Tips (for information purposes only)



PALMEX ORIGINAL COLLECTION

# BEFORE STARTING

## BEFORE STARTING

1 The roofing and its components shall comply with local or national building regulations in force.

2 The installation shall comply with Palmex installation procedures found in this present guide.

3 **Fasteners:**

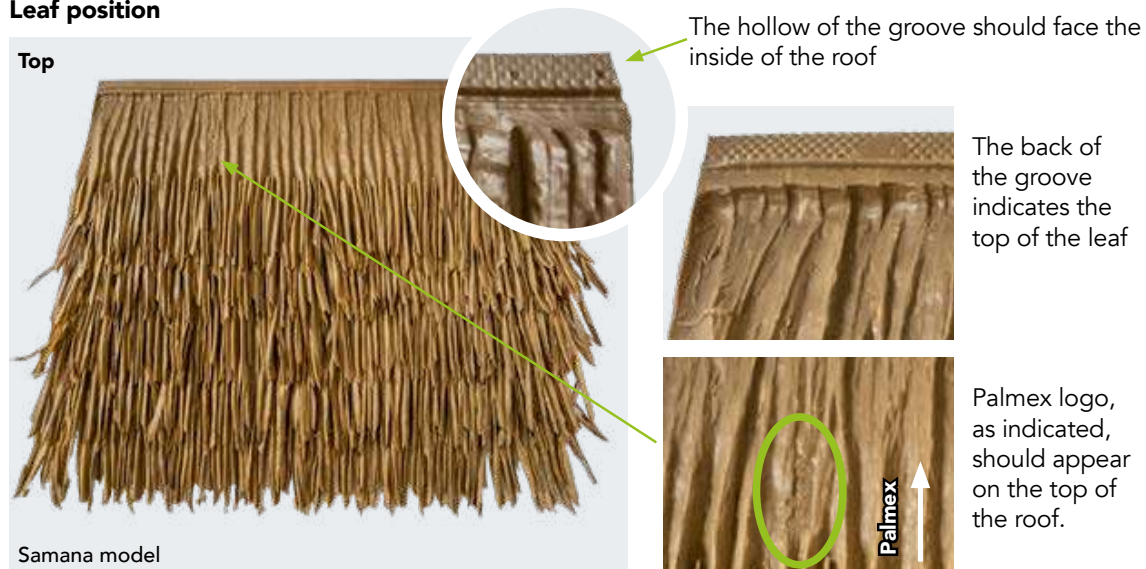
Screws, nails and staples indicated in this document are for illustrative purposes only. It is the customer's responsibility to select the right fixing tools and hardware material for the type of frame and structure and to make sure that they resist the local climate. Palmex International cannot be held responsible for the choice of fasteners used to fix Palmex products.

4 **Roof slope**

Palmex waterproofing guarantee is valid according to specific criteria. Please see table below. This installation guide presents techniques for waterproof-guaranteed roofing. However, the choice of roof slope and row spacing remains yours as long as you are totally aware that waterproofing will not be guaranteed.

Roof slope	Row spacing		Waterproofing guaranteed	Qty of leaves/m2	Qty of ft2/ leaf
	in cm	in inches			
Below 30°	-	-	No	-	-
30° & above	12.5 cm	4 3/4"	Yes, installation with and without rails	8	1.35
30° & above	14.3 cm	5 5/8"	Yes, installation without rails	7	1.54
41° & above	16.7 cm	6 1/2"	Yes, installation without rails	6	1.79
Any	20 cm	7 7/8"	No	5	2.17

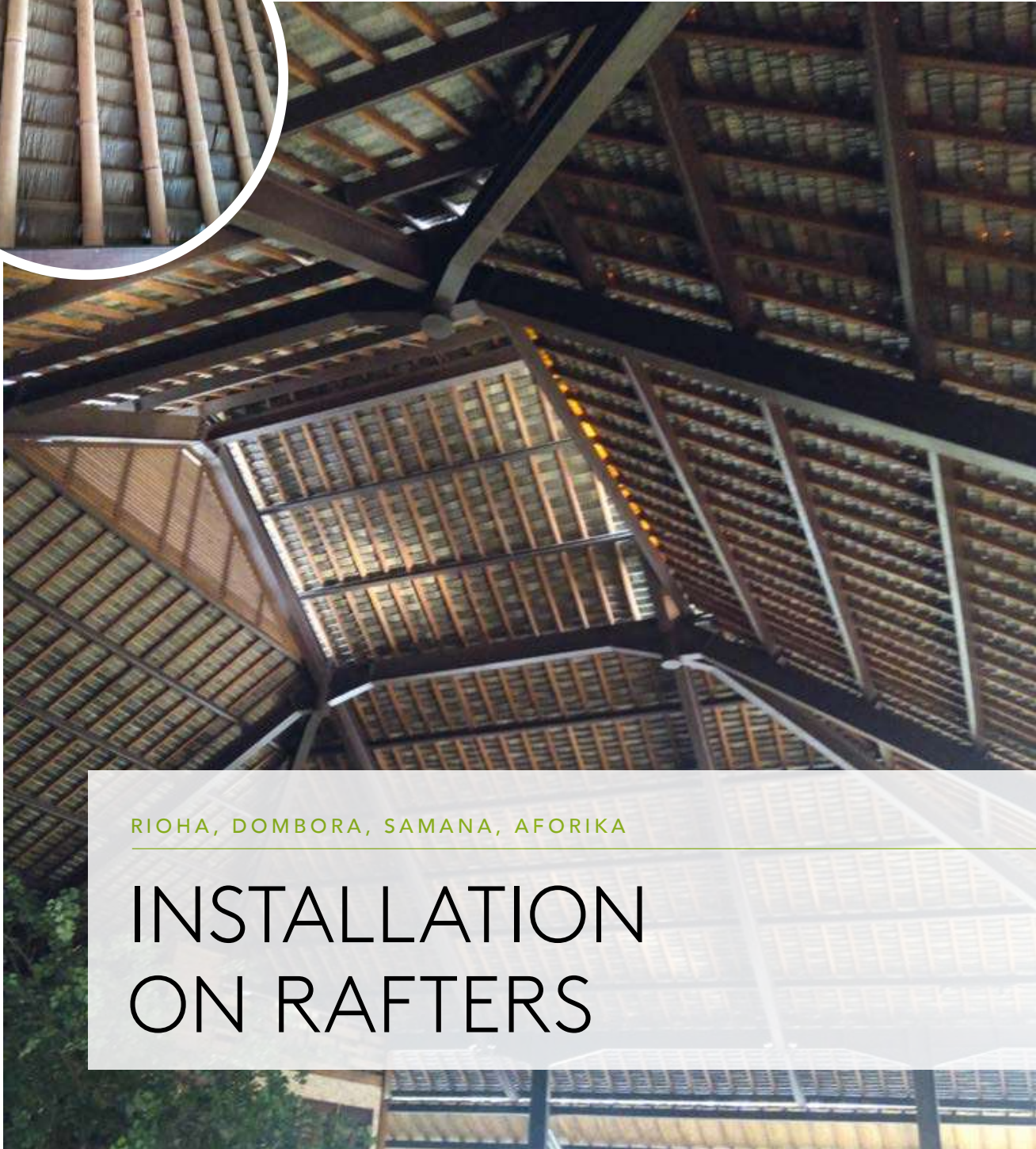
5 **Leaf position**



6 **Overlapping**

Palmex leaves must always be installed in staggered pattern all over the roof so that the joints between two leaves (with or without Palmex fixing rails) on a given row is covered (hidden) by the next row above. See page 7 drawing # 4, page 9 drawing # 2, page 11 drawing # 2 and page 12 drawing # 3.





RIOHA, DOMBORA, SAMANA, AFORIKA

# INSTALLATION ON RAFTERS

## USING PALMEX RAILS

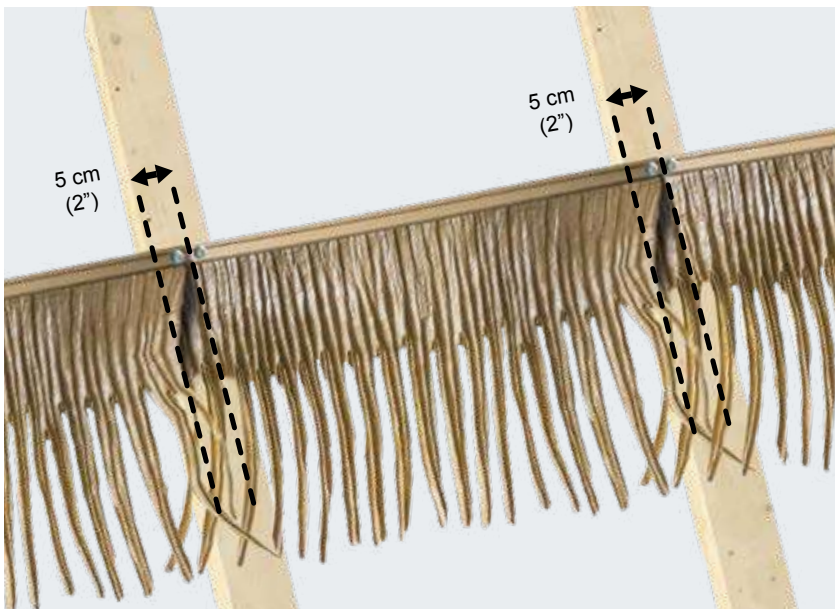
**1** Sliding leaves into the rails



To insert the leaf effortlessly, you may cut the edge of the leaf at a 45° angle or else use a lubricant



Once the leaf has been inserted into the Palmex PVC rail, fold the rail back towards the top of the leaf keeping a **1 cm** space at the fold between the rail and the top of the leaf.

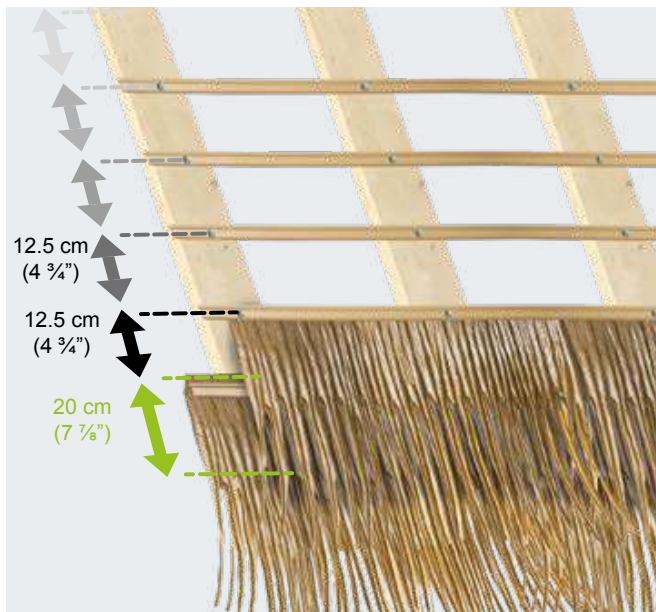


**2** At the junction of two rails, insert the leaves from one rail into the opposite one with a leaf-overlap of 5 cm.

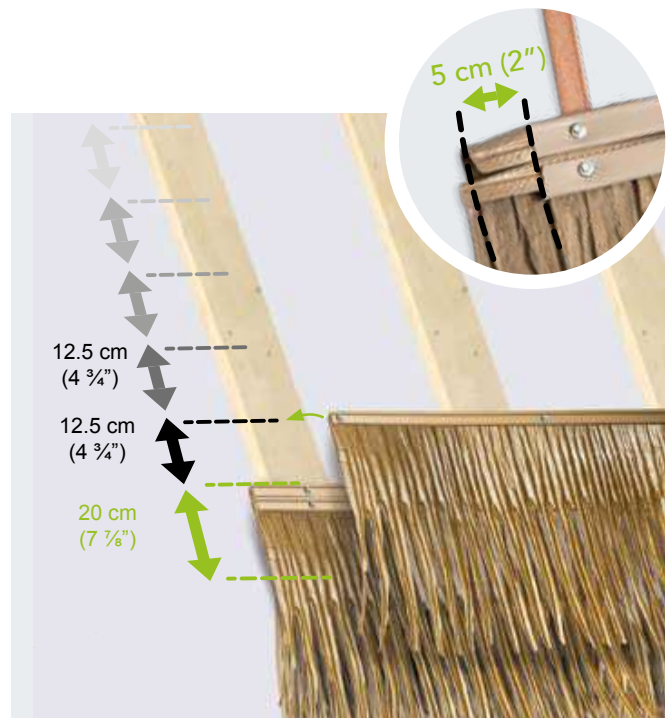
**+** **Option:** You may fuse the leaves together at the junctions using a heat gun.



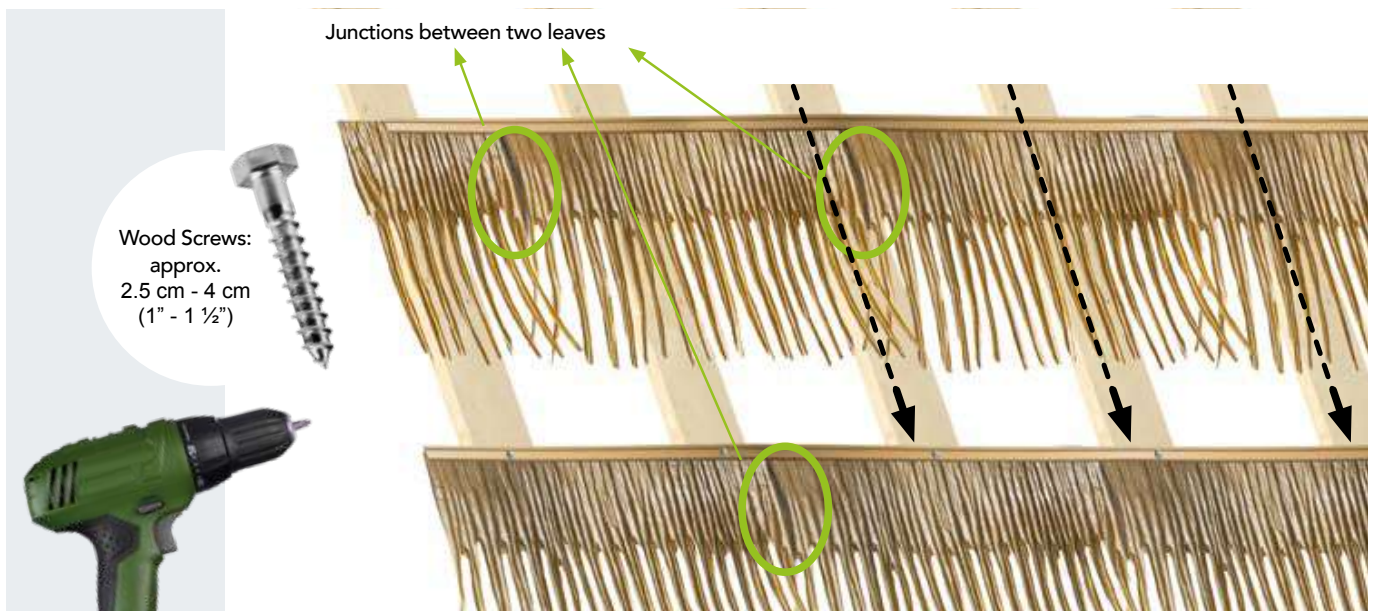
## USING PALMEX RAILS



**3A Option 1:** Insert two leaves into the initial starter rail to create thickness and volume - carefully intertwining the leaf tips (fingers) so they overlap nicely. The very first row should be placed **20 cm** from the bottom edge. The second, **12.5 cm** from the first. All sub-sequent rows should be placed **12.5 cm** apart.



**3B Option 2:** Place two rails with a single row of leaves in each very close together, one immediately above the other without a space - carefully intertwining the leaf tips (fingers) so they overlap nicely before placing the next row. These first two rows must be laid **20 cm** from the bottom edge (eaves). Then, third and subsequent rows should be laid **12.5 cm** apart.

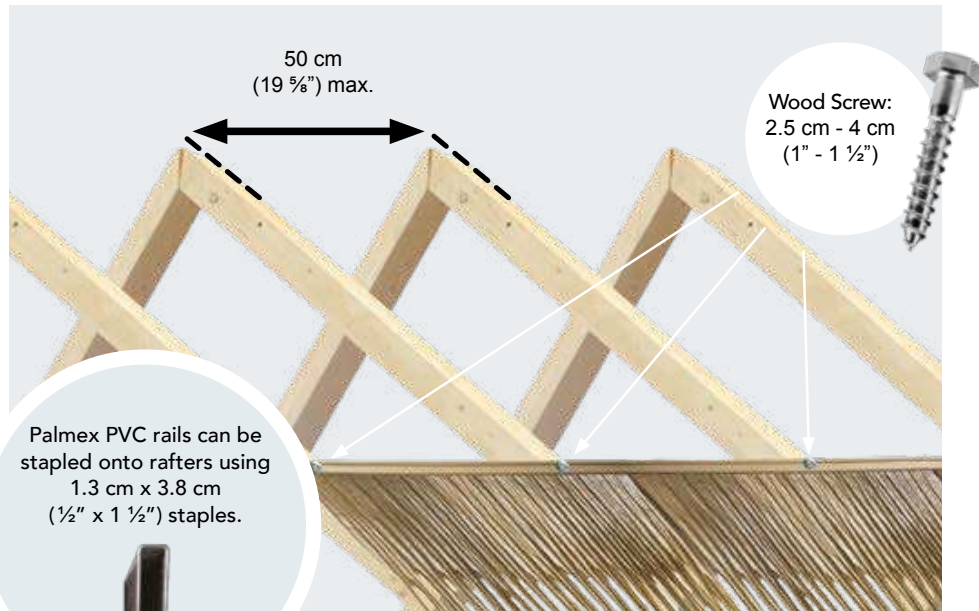


**4** Leaves must always be installed in staggered pattern all over the roof so that the junctions between two leaves are always covered by the middle of the leaves from the next row above.

## INSTALLATION ON RAFTERS

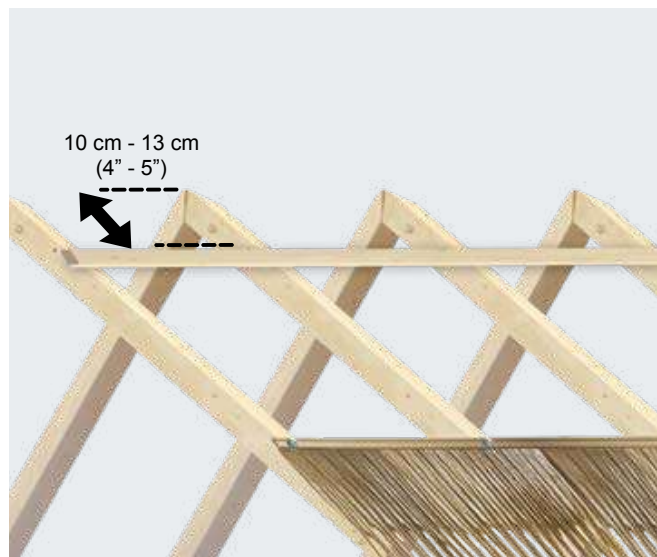
### USING PALMEX RAILS

- 5 Rafters should be **no more than 50 cm apart**.



Once the leaves are inserted into the rails, screw the rails, folded over the leaves, to each rafter.

PRO TIP



- + **Option:** To facilitate the eventual top ridge installation you can also place a wooden batten **10 cm – 13 cm** from the top (ridge) of the roof.

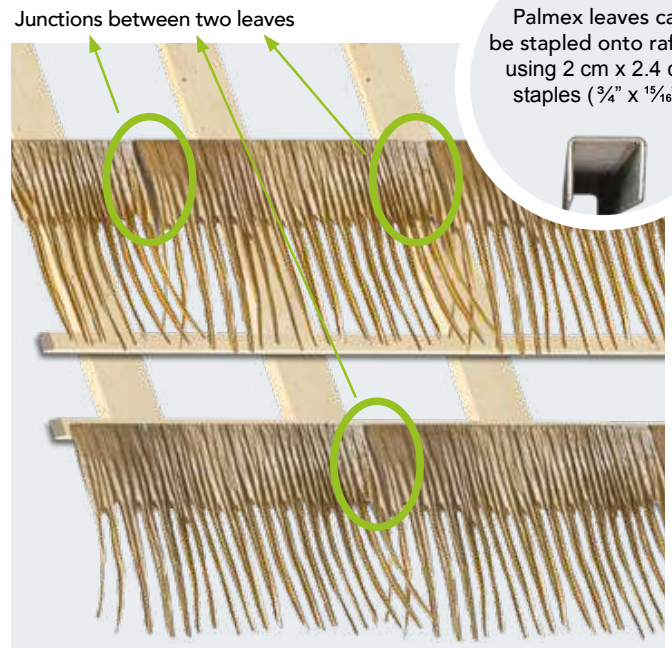
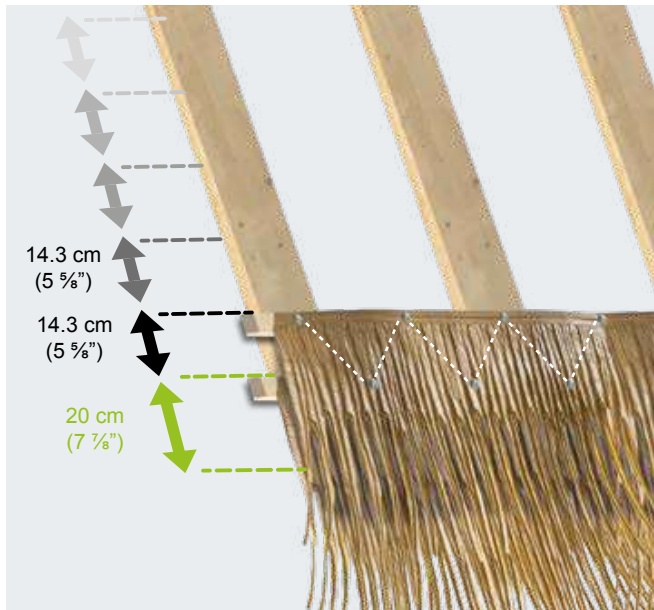


- 6 Place the ridge cover over the very top of the roof and screw it onto the rafters and/or onto the wooden batten on each side of the roof (for further ridge installation details, see Accessories section).



## USING HORIZONTAL BATTENS

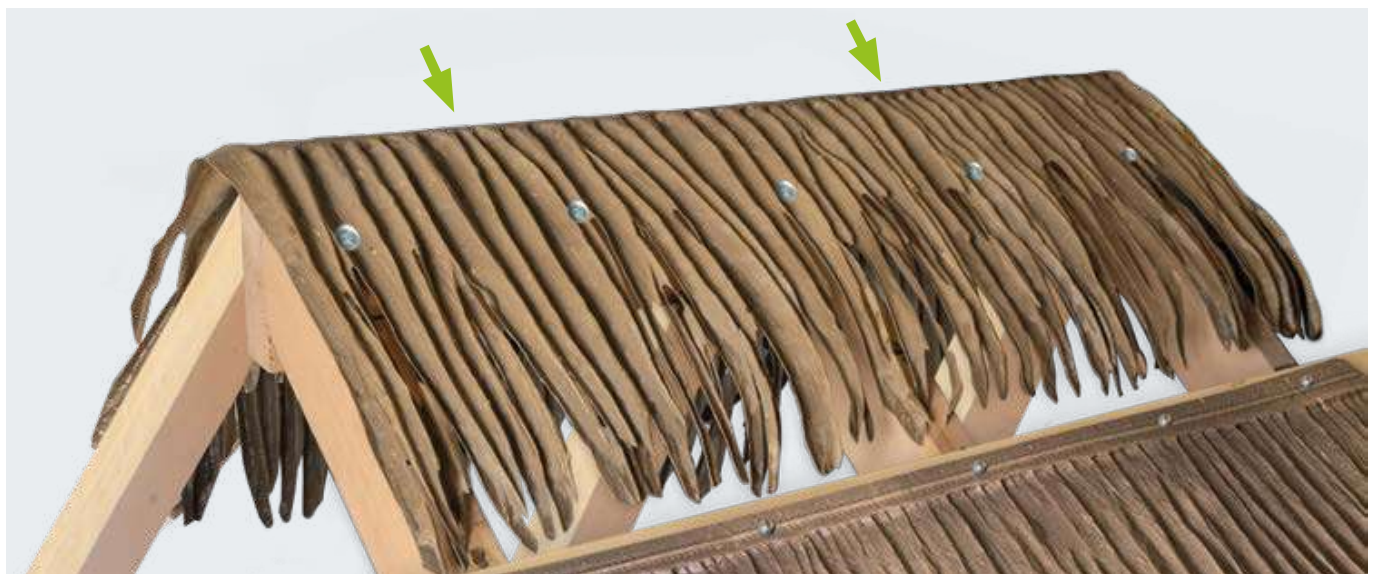
PRO TIP



Palmex leaves can be stapled onto rafters using 2 cm x 2.4 cm staples ( $\frac{3}{4}$ " x  $1\frac{1}{8}$ " )

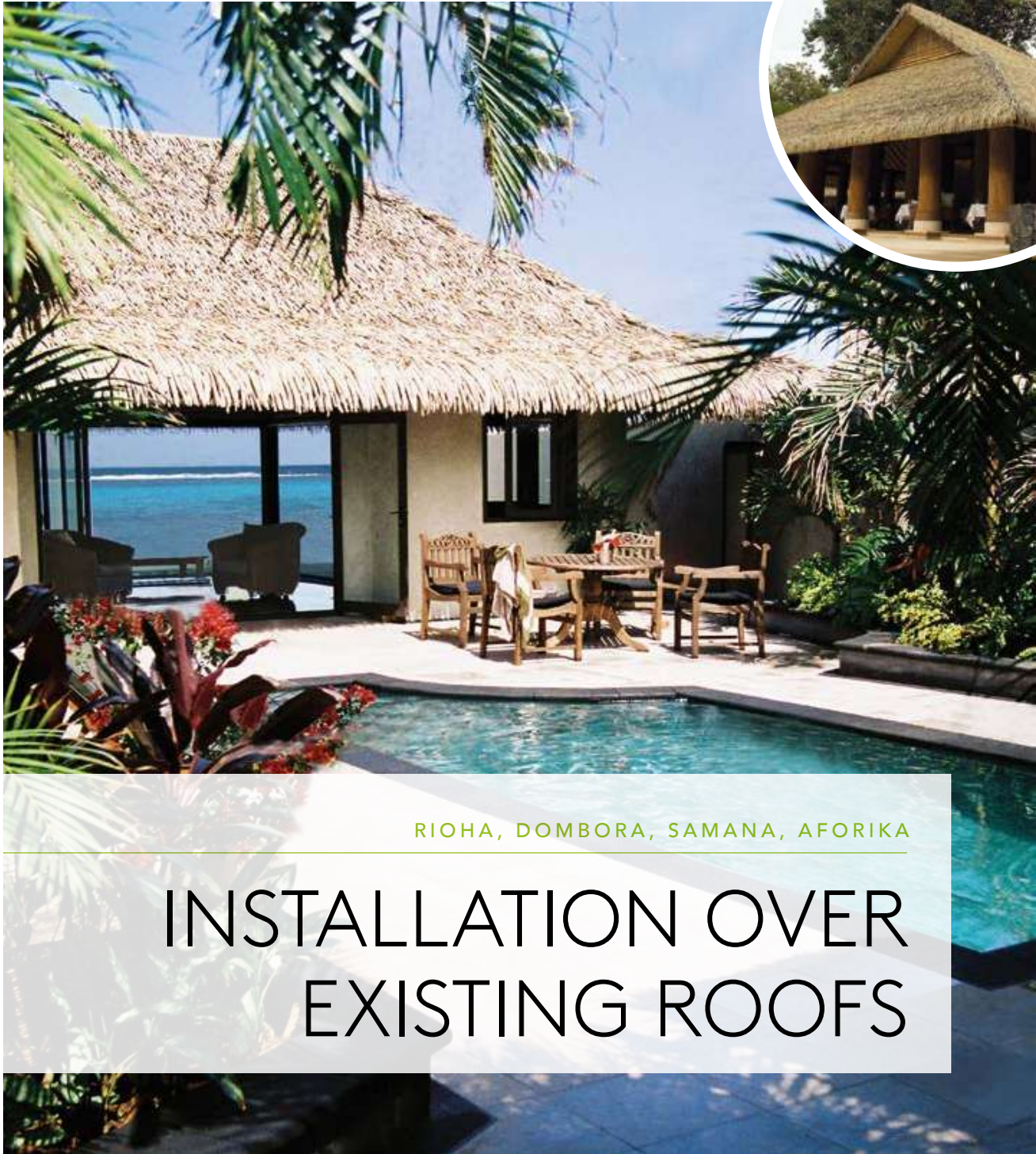
- 1 Place the first batten horizontally **20 cm** from the bottom edge of the roof. Fix **two rows of leaves** to this slat by intertwining the leaf fingers. Second batten and all subsequent ones should be placed **14.3 cm** or **16.7 cm** (depending on roof slope, see table page 3) from the previous one, up to the top of the roof. Fix **one row of leaves** to these slats.

- 2 Leaves must always be installed in staggered pattern all over the roof so that the junctions between two leaves are always covered by the middle of the leaves from the next row above. For a better resistance to strong winds, we recommend that you add a row of nails, staples or screws on the leaves in the batten below in a staggered manner.



- 3 Install the ridge cover once each row of leaves has been fully laid.





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# INSTALLATION OVER EXISTING ROOFS





INSTALLATION OVER EXISTING ROOFS

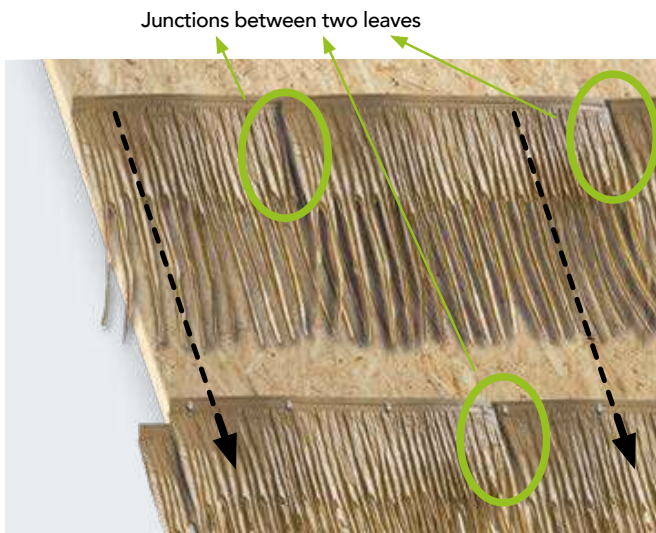
ON TOP OF PLYWOOD SHEET



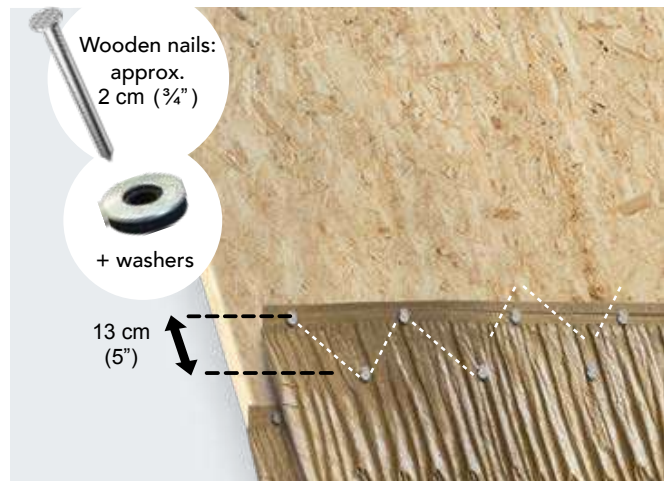
Draw the measurements before starting the installation of the leaves.



- 1 Lay the first row of leaves **20 cm** from the bottom of the roof. Lay the second row **5 cm** above the first one. From the third row, fix all subsequent rows **14.3 cm** or **16.7 cm** (depending on the roof slope, see page 3) from the previous one.



- 2 Leaves must always be installed in staggered pattern all over the roof so that the junctions between two leaves are always covered by the middle of the leaves from the next row above.



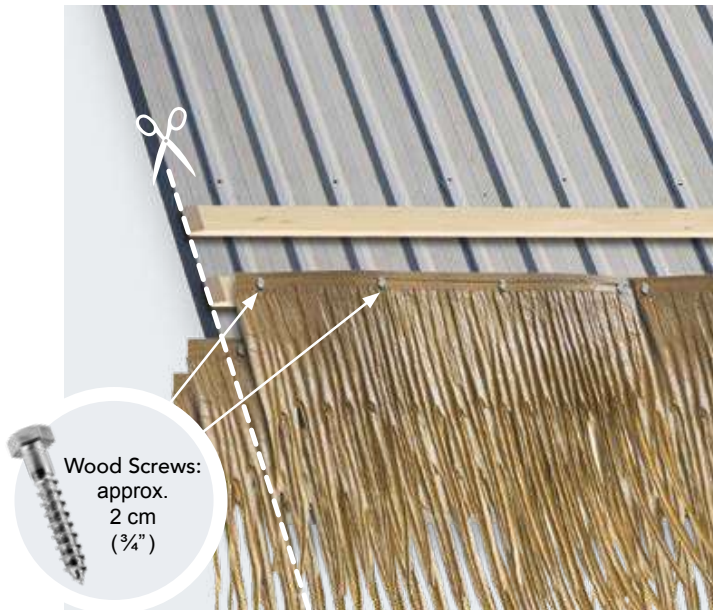
- 3 For a better resistance against strong winds, we recommend that you add a row of nails or staples (2.4 cm x 2 cm ; 1" x 3/4") **13 cm** below the top of the leaves in a staggered manner.

Thickness of wood paneling supporting the leaves shall not be less than 15 mm (5/8").

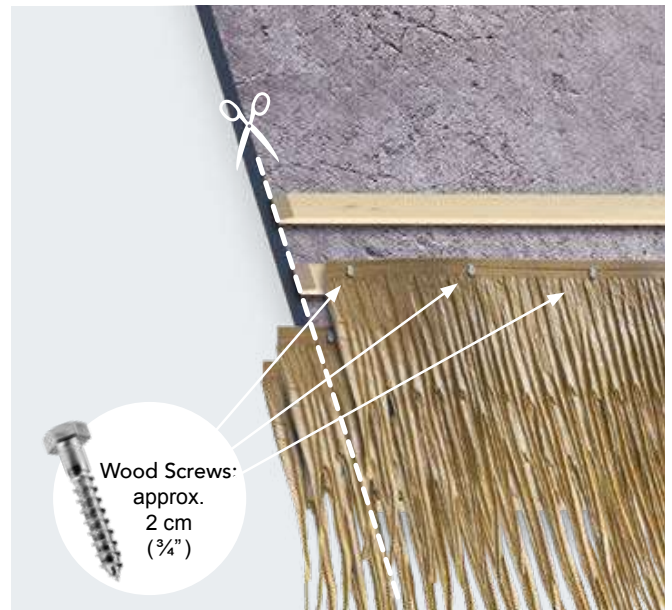


## INSTALLATION OVER EXISTING ROOFS

### ON METAL SHEETING OR CONCRETE ROOFING



- 1 We recommend placing **horizontal wooden battens** over existing metal or concrete roofing structures to which Palmex leaves will be nailed, stapled or screwed. This system allows a better air circulation and will lower indoor or under-roof temperatures.



- 2 Place the first batten horizontally **20 cm** from the bottom edge of the roof. Fix **two rows of leaves** to this slat by intertwining the leaf fingers. Second batten and all subsequent ones should be placed **14.3 cm** or **16.7 cm** (depending on roof slope, see table page 3) from the previous one, up to the top of the roof. Fix **one row of leaves** to these slats.

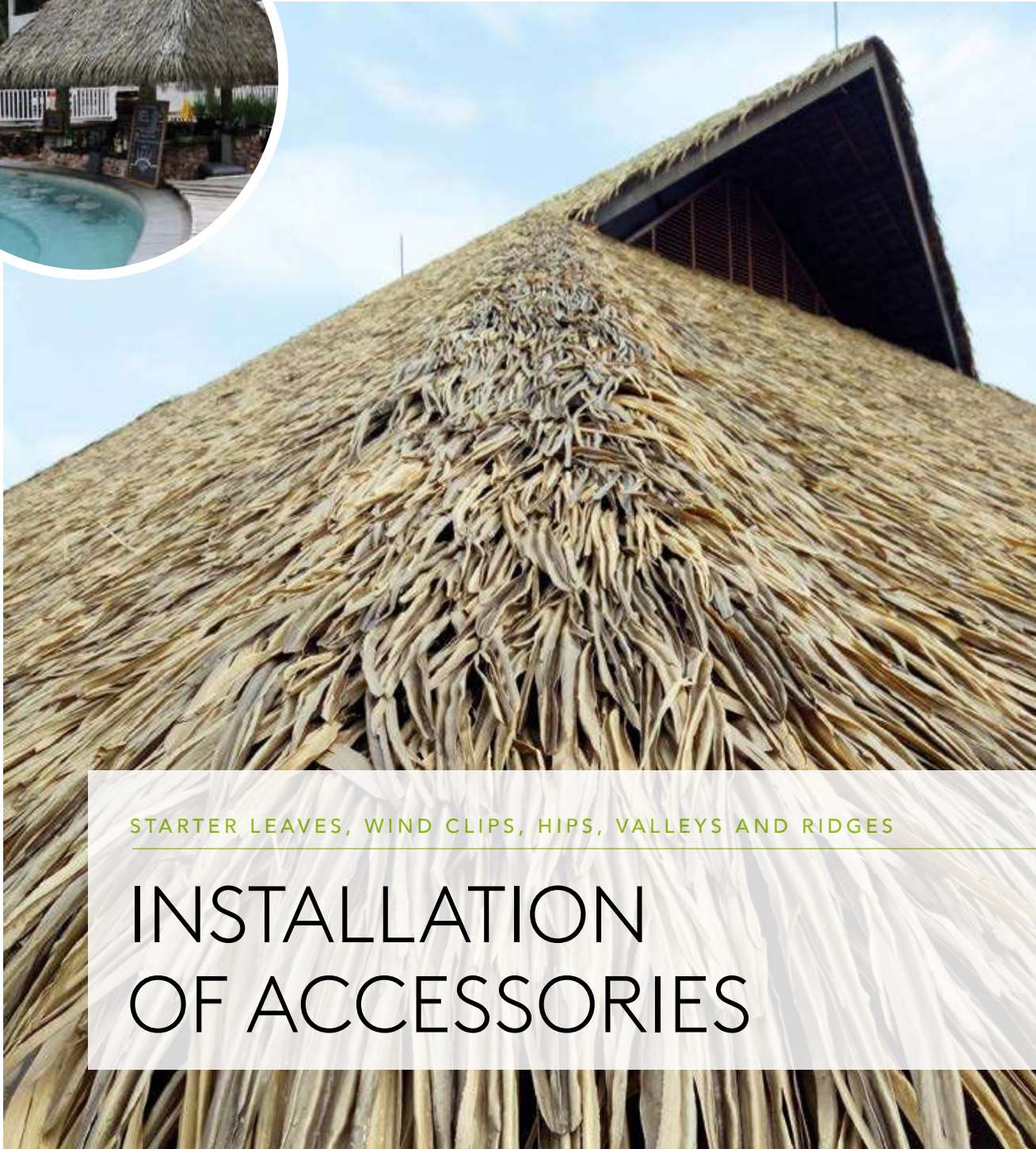
Junctions between two leaves



- 3 Leaves must always be installed in staggered pattern all over the roof so that the junctions between two leaves are always covered by the middle of the leaves from the next row above. For a better resistance to strong winds, we recommend that you add a row of nails, staples or screws on the leaves in the batten below in a staggered manner.







STARTER LEAVES, WIND CLIPS, HIPS, VALLEYS AND RIDGES

# INSTALLATION OF ACCESSORIES



## STARTER LEAF



1 To create more thickness at the bottom of the roof, we suggest overlaying **2 rows of starter leaves** around the perimeter.



2 Place both starter leaves on the top of each other and screw them directly to the fascia.

## WIND CLIPS



+ For a better resistance against strong winds, when the leaves are fixed with Palmex PVC rails directly on the roof rafters, the use of Palmex PVC wind clips is recommended. Place the wind clips over the fixing rails and screw them to each rafter all over the roof. For an installation of Palmex leaves on an existing roof and on horizontal battens, we recommend that you add an additional row of nails, staples or screws as indicated on page 11, drawing # 3.



## INSTALLATION OF ACCESSORIES

### PRE-MOULDED HIPS/VALLEYS

Hips and Valleys are used over all angular roofing joints for a waterproof and esthetic finish.

PRE-MOULDED HIP



- 1 At the junction between two roof sections, trim Palmex roofing leaves from one section diagonally along the rafter.

- 2 Trim the roofing leaves of the opposite section with a slight angle so they overlap the leaves of the adjoining rows.

### VALLEYS



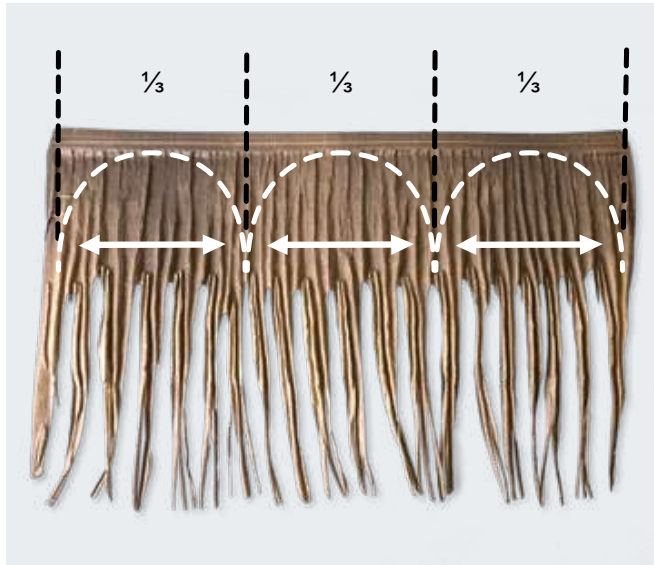
- 3 It is important to intertwin the leaf fingers from each roof section before placing the pre-moulded hip. Lay the pre-moulded hip, over the joint, **every other row**. Fix it to the rafters with at least two screws, nails or staples along the middle part of the hip.

- 4 To properly finish a V intersection where two roof slopes meet and form a valley, add a pre-moulded hip, or equivalent protection, **on each row**.

## INSTALLATION OF ACCESSORIES

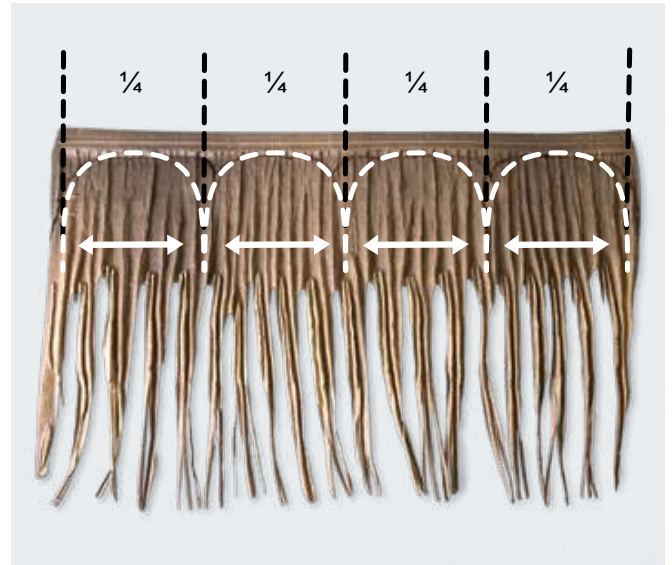
### CUSTOM-CUT HIPS (3 PIECES)

Hips can also be made with a Palmex roofing leaf. Please note that these hand-made hips cannot be used as valleys to cover a V intersection between two roof slopes.



- 1A** You can use a Palmex leaf – cut into 3 pieces – to make your own small hips.  
Lay one small hip per row.

### CUSTOM-CUT HIPS (4 PIECES)



- 1B** You can use a Palmex leaf – cut into 4 pieces – to make your own small hips.  
Lay two small hips per row, placing them in an oblique position.



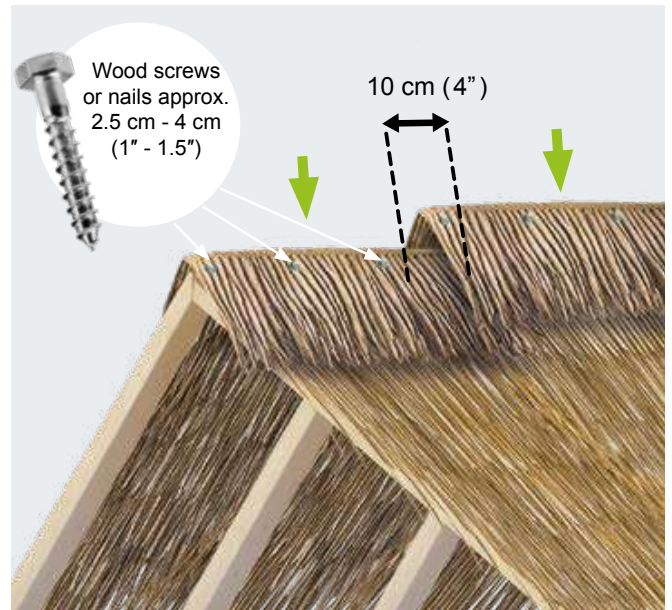
- D** Fix the hips to the rafters with at least two screws, nails or staples along the middle part of the hips.



## LINEAR RIDGES



- 1 Put at least 4 screws or nails on either side of each ridge, positioned **10 cm to 13 cm** below the crest or directly on the rafters for open structures.



- 2 When multiple ridges are required, make sure there is a **10 cm overlap**.

## ROUND RIDGES

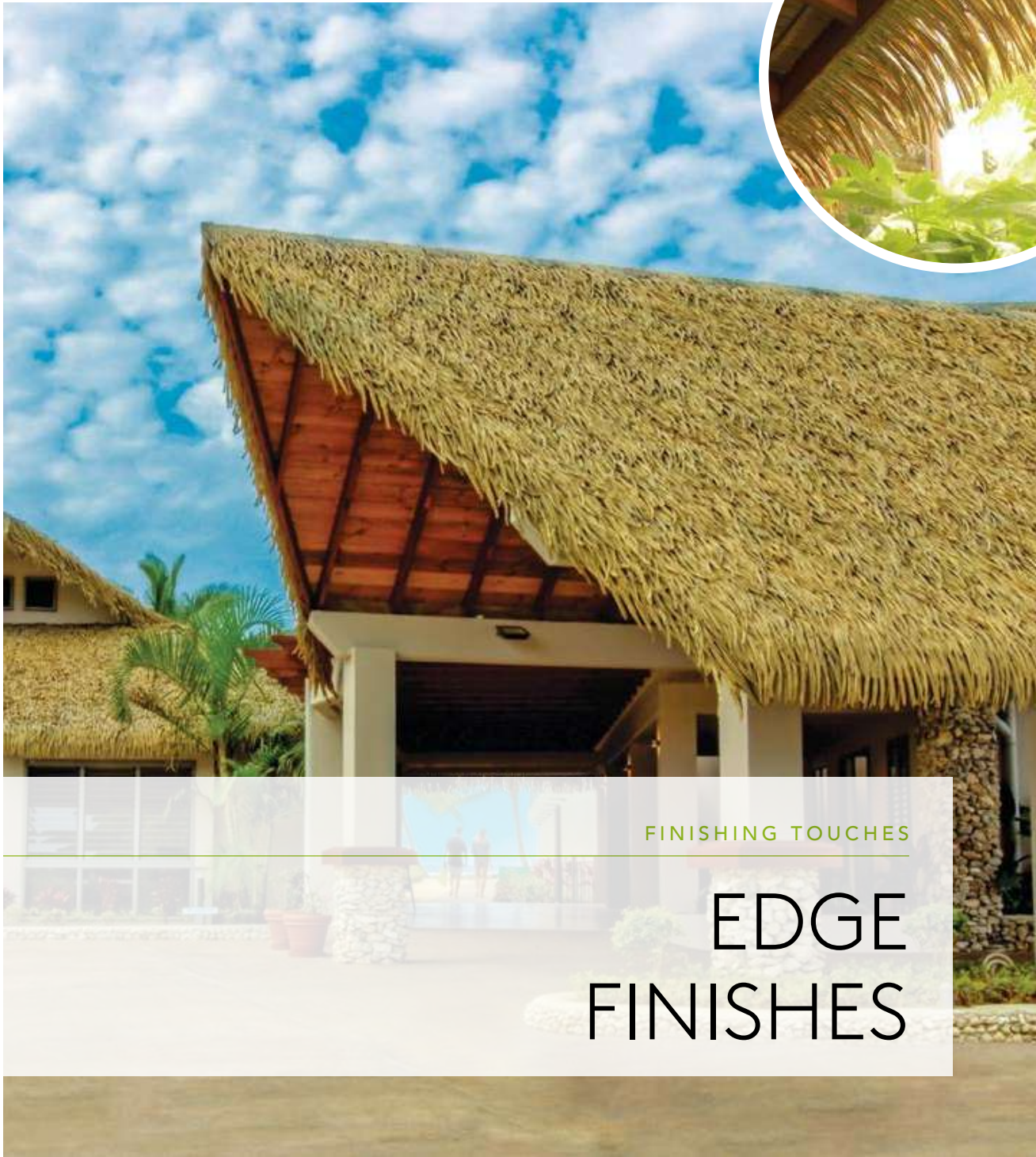


- 1 Lay the ridge cover once all other leaves have been laid. Screw or nail the ridge cap to each of the wooden rafters.



- D Example of a round ridge cap on a parasol.





FINISHING TOUCHES

# EDGE FINISHES

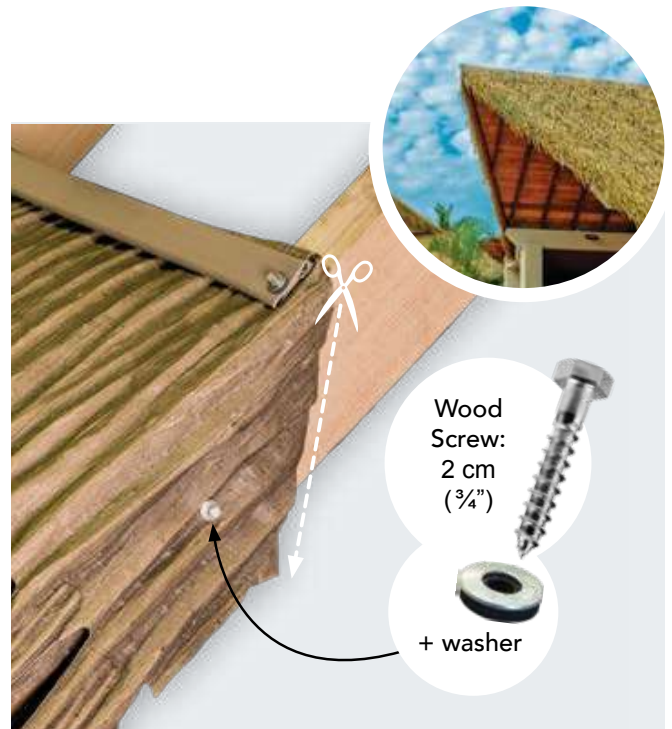




## FINISHING TOUCHES



- + To create a different style, you can trim the leaf fingers along the bottom edge of the roof.



- + For the side edges, extend the leaves of a few centimeters/inches to be able to fold them over and fix them onto the rafters.

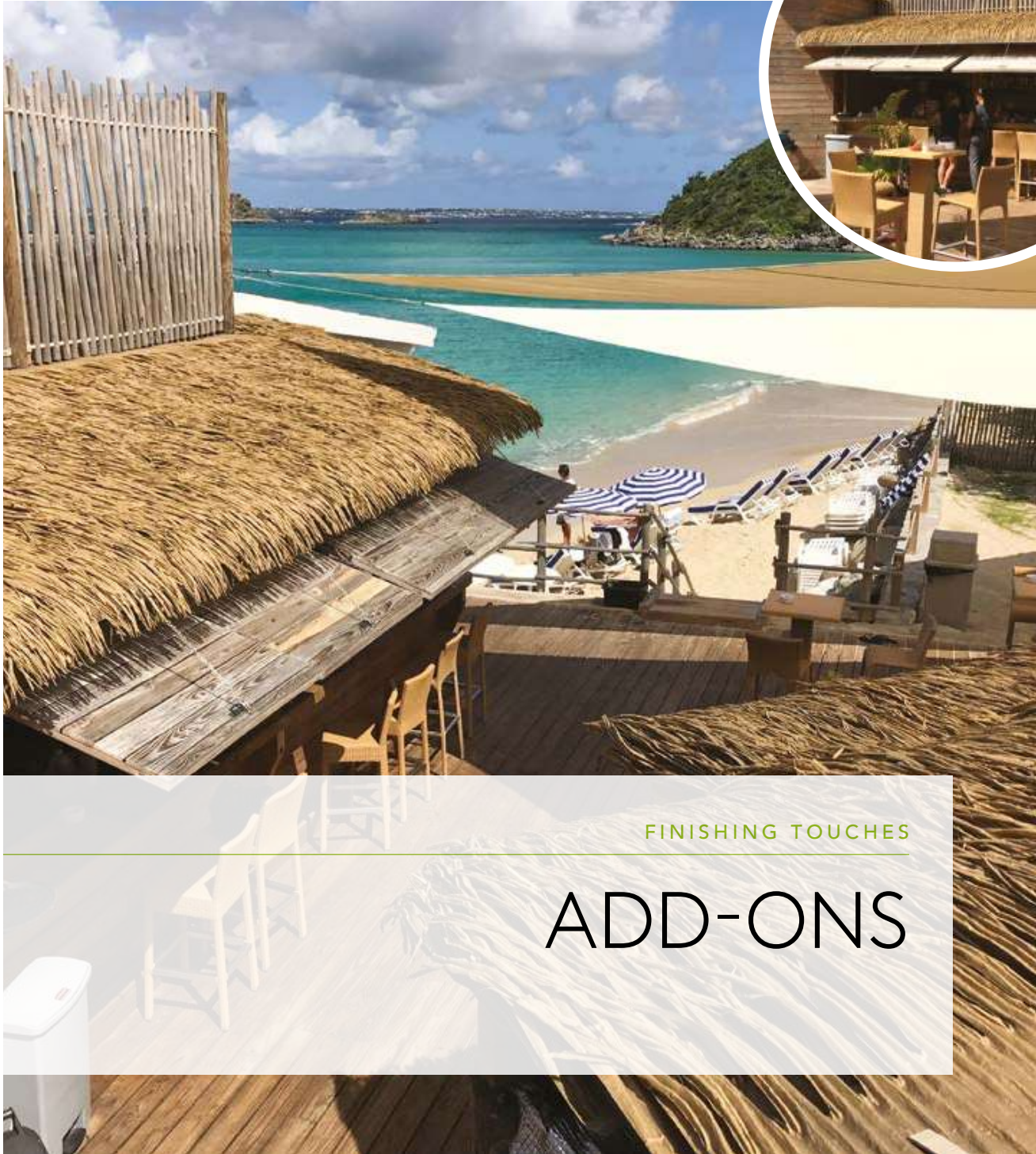


- + Palmex rails and/or leaves can also be trimmed or left slightly protruding along rafter edges.



The finished look





FINISHING TOUCHES

# ADD-ONS





## VELUX SKYLIGHT



1

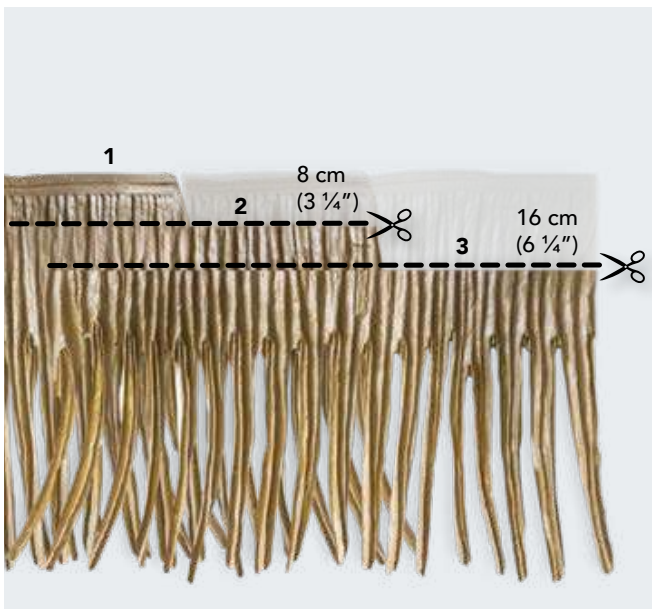
Palmex thatch can be laid around skylights by inserting a roof flashing either side of the window for water-tightness.

**Note:** Various types of skylight are available on the market. It is hence important to be fully aware of each retailer's or manufacturer's installation guidelines. Palmex cannot be held responsible for the overall installation.

Good news: Palmex thatch wrapping materials can serve as flashing too!

Nails  
approx.  
2 cm  
( $\frac{3}{4}$ " )

## AWNINGS



1

To nicely finish the last row on an awning, cut one leaf at an **8 cm indent** from the top edge and another at a **16 cm indent**. These specially cut leaves can be installed at the intersection where the awning meets an adjacent vertical wall.

2

Place leaf # 2 over leaf # 1 and leaf # 3 over leaf # 2 as shown above.



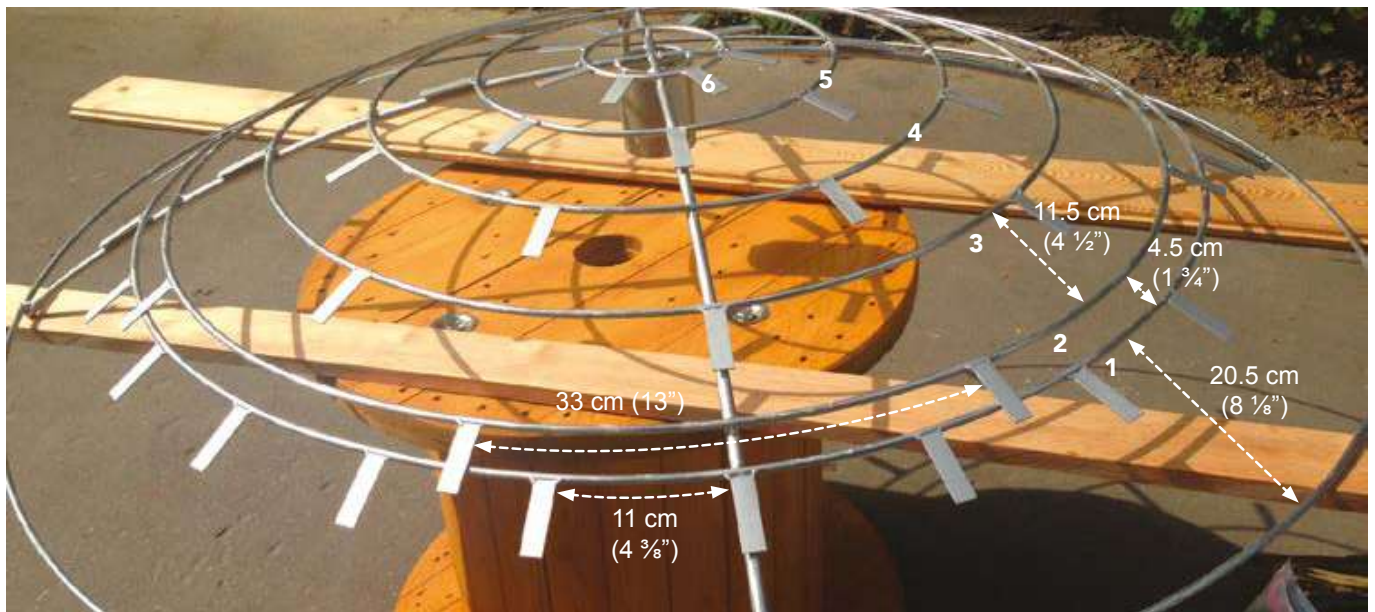
UMBRELLAS

# INSTALLATION OF OUR *FIJI* LEAVES





## UMBRELLAS



- 1 Number of leaves to lay per ring on a 1.60 m. (5') diameter metal frame, from bottom to top would be as follows: **Ring 1: 35, ring 2: 33, ring 3: 27, ring 4: 20, ring 5: 14, ring 6: 9.** Quantity of leaves varies depending on the dimensions of your structure.



- 2 Place a *Fiji* leaf over the metal frame. Slide the upper strip under the horizontal rod and fold it over the rod. Insert the *Fiji* clip over the strip and the rod to keep the leaf firmly attached to the umbrella structure.



- i Required spacing between clips is 11 cm.



WHAT WE DO

SOME OF OUR PROJECTS



Costa Rica



Fiji



Gabon



Indonesia



Indonesia



Malaysia