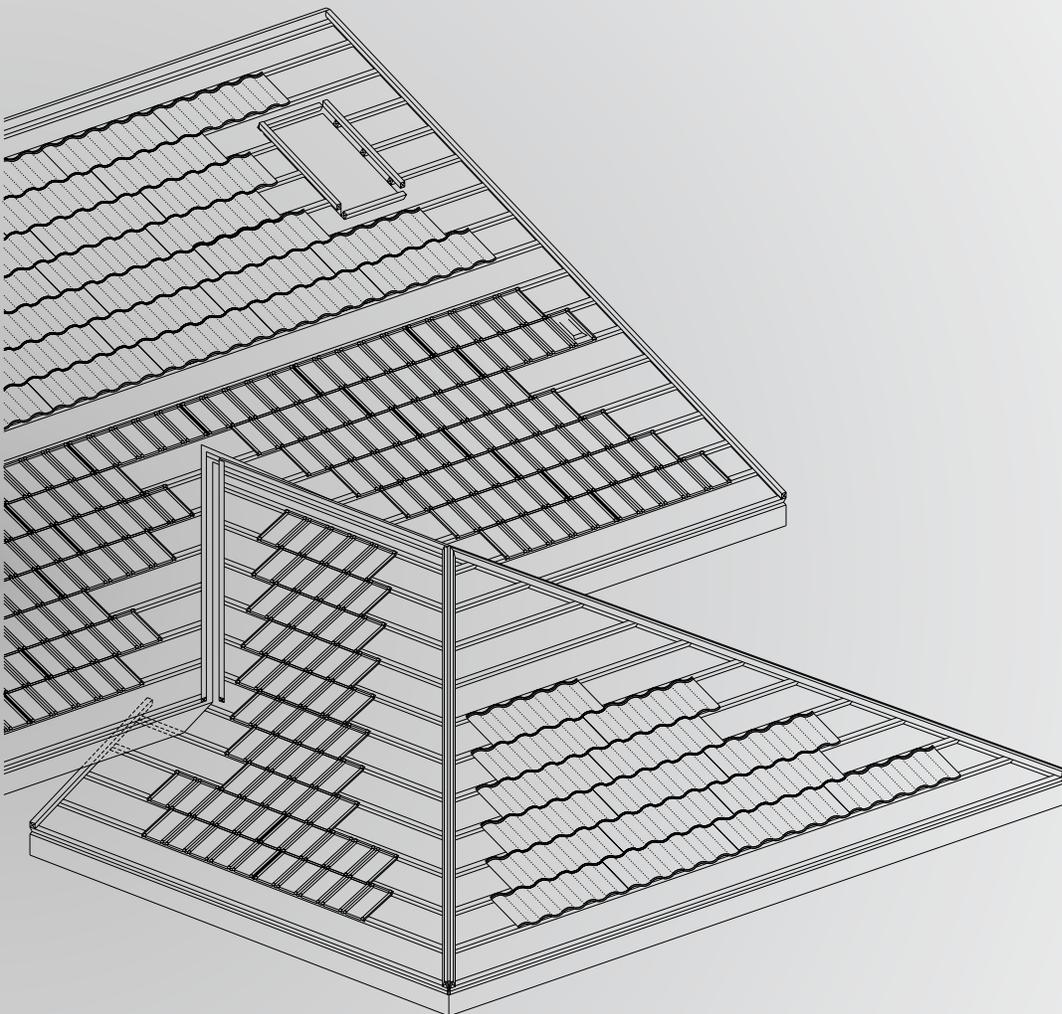

Product Installation Manual



**CONTINENTAL
SHADOWLINE
WOODSHAKE
TALAVERA SF**

This Product Manual is designed as a pictorial and instructional tool to clearly depict to the contractor, installer, distributor and architect, recommended installation techniques and procedures to confidently estimate and install a complete Allmet Roofing System. This manual can be used separately or in conjunction with the installation DVD.

This manual depicts generally practiced application techniques only, which should not be substituted for local building code specifications. Allmet Roofing Products carry product approval reports for most building code agencies in North America which should be referenced for specific local requirements (see list).

These methods have been developed by Allmet Roofing Products as proven acceptable and tested methods of installing Allmet Stone Coated Steel Roofing Products. Allmet Roofing Products does not construe that these are the only methods but again are the tried and true proven techniques that are currently practiced by the majority of trained installers.

This manual emphasizes common roofing practices in use today. If application techniques vary from those illustrated in this manual or if using this manual for applications not covered, please consult the technical department at 1-800-265-9357.

As Allmet Roofing Products have no control over the installation techniques used, no warranty can be made relating to the installation of Allmet products. Testing reports for various areas are available which should be analyzed for additional procedures after careful review of this manual.

Allmet Roofing Products subscribes to the "Guide Specifications for Metal Roofing" as adopted and published by the Metal Construction Association and should be read in conjunction with this manual. Copies are made available by the association.

Run-off or Gathered Roof Water:

The gathering, storage and/or usage of run-off water from a roof system is a growing trend, and is performed entirely at the discretion of the property owner and not at the recommendation of Allmet Roofing Products. Allmet Roofing has not conducted any testing or evaluation regarding the advisability or safety of such practice, but is concerned that run-off storm water may contain pollutants or harmful substances that are deposited on roofs from airborne contaminants or that might naturally erode from Allmet products. Allmet Roofing therefore recommends that run-off water not be used for any human consumption or contact.

Before engaging in any usage of run-off water, Allmet Roofing recommends that the property owner contact and obtain the opinion of an environmental engineer or similar local professional service.

Allmet assumes no liability for either incorrect installation of its products or personal injury that may occur as a result of installing such products. The installation methods demonstrated in these materials are not the only ways to install Allmet products, but have been developed as a reference guide using acceptable, tested and proven methods for the standard installation of Allmet products. Contractors and installers should at all times use their professional judgment, and modify and tailor such methods where appropriate or necessary to suit each specific installation or any applicable local building codes or ordinances. Due to the fact that Allmet has no control over the actual installation techniques used, no warranty is expressed or implied relating to installation of the product. Allmet's liability with respect to Allmet products is limited exclusively to its standard written limited lifetime warranty.

Please Note: It is the responsibility of the installer to adhere to local building codes.

Installation Product Manual

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General Information

Section One

Storage

Product must be kept covered, well ventilated and dry until installed. If the stacked tiles become wet, they should be immediately separated and dried otherwise staining may occur. Prolonged wetness in the pile could create an electrolytic action which will negatively affect the products effective service life and subject the coating to permanent damage, especially if subjected to freezing weather, which is not covered by the product warranty. Please refer to the MCA minimum performance guidelines for more detailed standard practice information relating to site storage of metal roofing.

Roof Traffic

The Allmet tiles are installed from the top down minimizing traffic on the completed roof. When walking on the installed tile is required, walk on the front edge of the low sections with the weight on the balls of your feet, directly over the batten. Please refer to pages 67 for details on additional protection.

Footwear

When it is required to walk on the Allmet tiles, rubber soled athletic type shoes or similar soft soled footwear is recommended to avoid coating damage and to provide a super grip for safety.

Roof Pitch

The Allmet tile is designed to be installed from a minimum of 4:12 pitch up to a vertical face in all climates and down to 3:12 in warm weather climates. For slopes under 3:12, the tiles generally act only as a decorative roof covering. In this type of installation please consult our technical department and the local building officials.

Underlayment

Underlayment is generally required by most building codes. When allowed by the building code, underlayment is not required in re-roofing over existing composition roofs when the existing roof is in an acceptable condition to act as the roofs underlayment. When installing over open rafters a self supporting underlayment is recommended equal to "Tri-Flex 30". Underlayment is not required when re-roofing, when allowed by code, over existing composition roofs when the existing roof is in an acceptable condition to act as the underlayment, except in area of extreme weather conditions. In areas with extreme weather conditions, the underlayment should be of a local code approved type.

Galvalume™

The Allmet Premium Roof System is produced exclusively from long lasting Galvalume™ steel. The Galvalume™ coating will react unfavorably if in direct contact with lead or copper in a wet environment. Rain water run-off from copper roofs onto an Allmet Roof should be avoided as it is very aggressive in nature and has a history of attacking the finishes. Only approved fasteners should be used. Please consult the technical department for recommendations.

Severe Weather Conditions

If the area is prone to severe ice, snow, water or wind, additional measures may be required. Please contact the Allmet technical department for more detailed procedures.

Installation Labor

A minimum two man crew is recommended from start to finish. This will ensure a cost effective, quality installation. A qualified two man crew is generally able to install one square (100ft²) per hour under normal circumstances.

Bending

The unique Allmet ceramic granular coating is very dense and some minor cracking of the coating can be expected when bending the product. This tends to be more severe in colder weather and if the radius of the bends are too small. Allmet recommends that where the bends are exposed (valleys, skylights) spray glaze be applied to the bend. In more severe applications ceramic granular should be applied into a coat of spray acrylic then sealed with another coat of acrylic. This method should also be used to repair the coatings where accidental damage has occurred. Touch-up materials are available through your local distributor.

Building Codes

It is the responsibility of the contractor / installer to check and meet all the requirements of local and national building codes before starting the installation. Pay special attention to the specific ventilation requirements of the building code. All roofs over conditioned space are required to be ventilated.

Scuffing

Minor scuff marks that show up white will visibly disappear by washing with water. Full protection of the coating is restored with a spot application of spray acrylic.

Wood Battens

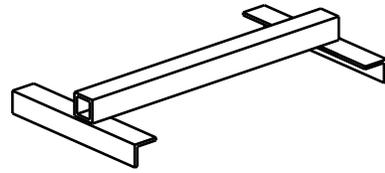
The system was designed and tested for installation using 1 1/2" x 1 1/2" actual size wood battens. This manual uses the 'nominal' size description of 2" x 2" for convenience.

Pressure treated lumber should not be used when installing Allmet Roofing Products, and will void the limited lifetime warranty offered by Allmet on such products. Any questions, please consult the technical department at 1-800-265-9357.

Batten Spacer

Part #10000053

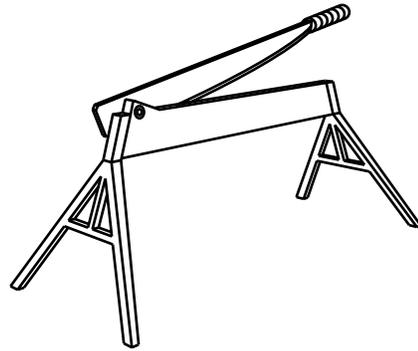
Designed to space battens accurately and swiftly. Turned sideways it also spaces the valley battens. Batten spacers should be purchased in sets of 2. Weight: 2.2 lbs. / 1 kg



Tile Cutter

Part #10000050

This tool is used to cut the Allmet panels both across or length ways. The legs are removable for ease of handling. The shear adjusts for left or right hand use. Replacement blades available. Weight: 57 lbs. / 27 kg



Replacement Blades:

Top Blade Part No 50000013

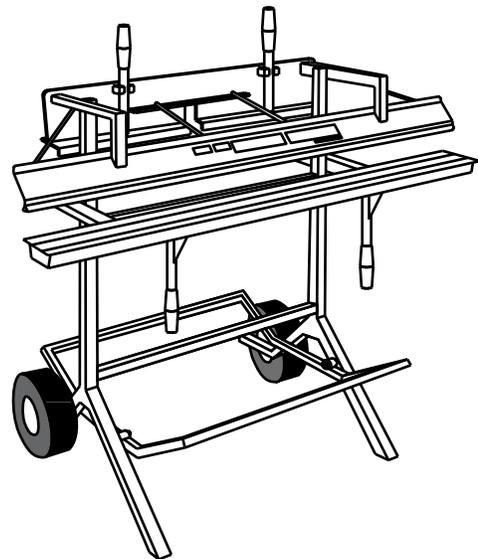
Bottom Blade: Part No 50000012

Shake Break

Part #30000049

This universal tool is designed to perform four specific tasks:

1. Half panel bends up or down across the width of a panel for hip, valley, gable, and roof to wall terminations.
2. Full panel bends up or down across the width of a panel for ridge, pitch change or roof to wall.
3. Bend flat stock or re-bend existing flashings.
4. Complete a tapered folded return across the width for finished end details. Weight: 132 lbs. / 60 kg



Note: Replacement parts are available for all Allmet tools. Contact inside sales.

General Safety Notes:

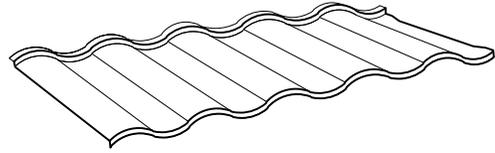
The safety tips provided here are for general awareness of user. Allmet Roofing Products assumes no liability or responsibility for incorrect use of its products or personal injury that may occur as a result of use.

- Select an open area and establish a safe work space perimeter to set up tools. Instruct anyone in the vicinity where you are working to stand a safe distance away.
- Inspect each tool before use. Do not use a tool that is not in good condition. Keep all tools in good condition with regular maintenance. Store tools properly when not in use.
- Wear personal protective equipment such as gloves and safety glasses when using these tools.
- Be aware of pinch points and all areas on tools to keep hands, fingers etc away during use.
- Wear proper clothing so as to not get caught in the blade or pinch areas of tools
- Take frequent breaks when using hand tools for prolonged periods of time.
- Use the **CORRECT** tool for the job.

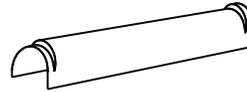
Installation Product Manual

**Panels and Accessories
Continental**

| | | |
|-------------------------|---------------------|---------------------|
| Continental Tile | Part # 120-XXX-01 | |
| Overall Length | 49 1/4" | 1250 mm |
| Length of Cover | 47 1/4" | 1200 mm |
| Width of Cover | 15 13/16" | 402 mm |
| Upstand | 7/8" | 22 mm |
| Tile Coverage | 5.2 ft ² | 0.48 m ² |
| Weight | 6 lbs | 2.8 kg |



| | | |
|-------------------|-------------------|--------|
| Barrel Cap | Part # 100-XXX-02 | |
| Overall Length | 16 1/2" | 420 mm |
| Length of Cover | 15 13/16" | 402 mm |
| Width | 5 1/2" | 140 mm |
| Overall Height | 3 1/2" | 90 mm |
| Weight | 1.2 lbs | 0.6 kg |

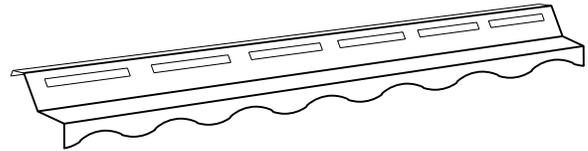


End Disc

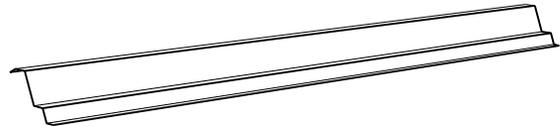


Part # 100-000-05

| | | |
|-----------------------|--------------------|---------------------|
| Vented Top Row | Part # 100-XXX-12 | |
| Overall Length | 8' | 2443 mm |
| Length of Cover | 7' 8" | 2400 mm |
| Rear Upstand | 4" | 101 mm |
| Horizontal Width | 3" | 76 mm |
| Profiled Down Turn | 2" | 51 mm |
| Free Area | 45 in ² | 290 cm ² |
| Weight | 8.5 lbs | 3.9 kg |



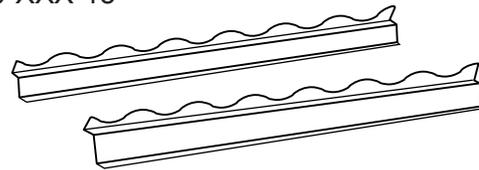
| | | |
|-------------------------------|-------------------|--------------|
| Metal Ridge/Hip Backer | Part # 100-XXX-21 | |
| Overall Length | 10' | 3067 mm |
| Overall Height | 5" | 127 mm |
| Overall Width | 6" | 152 mm |
| Thickness | .019 min. | 0.48 mm min. |
| Weight | 5.1 lbs | 2.3 kg |



Note: Available vented with special request (Part # 100-XXX-22)

Note: Part # 10-XX-21 and 10-XX-22 are not coated

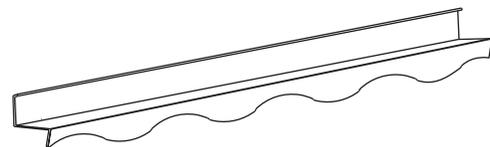
| | | |
|------------------------------------|---------------------------------------|------------|
| Metal Bird Edge 3" & 5" | Part # 100-XXX-13 & Part # 100-XXX-15 | |
| Overall Length | 8' | 2443 mm |
| Profiled Height | 2" | 51 mm |
| Pitched Return | 3/4" | 19 mm |
| Kick | 1/2" | 12 mm |
| Weight | 3.2 & 4.6 lbs | 1.5 & 2 kg |



| | | |
|-------------------------------|-------------------|---------|
| Universal Foam Closure | Part # 100-000-16 | |
| Length | 47 1/4" | 1200 mm |
| Width | 3/4" | 19 mm |
| Weight | 1.4 oz | 40 g |



| | | |
|----------------------------|-------------------|---------|
| Cross Wall Flashing | Part # 100-XXX-27 | |
| Overall Length | 8' | 2443 mm |
| Length of Cover | 7' 8" | 2340 mm |
| Top Kick | 1/2" | 12 mm |
| Rear Upstand | 1" | 25 mm |
| Top Cover Surface | 4 3/4" | 119 mm |
| Profiled Downturn | 1 5/8" | 42 mm |

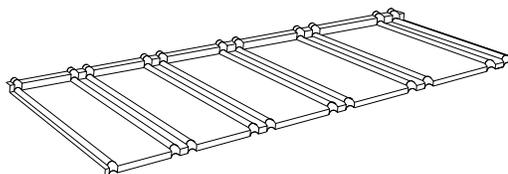


Weight 4.8 lbs 2.2 kg

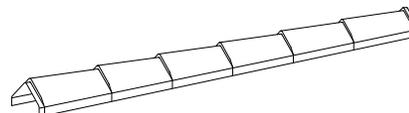
Installation Product Manual

Panels and Accessories Shadowline

| | | |
|------------------------|---------------------|---------------------|
| Shadowline Tile | Part # 200-XXX-01 | |
| Overall Length | 49 1/4" | 1250 mm |
| Length of Cover | 47 1/4" | 1200 mm |
| Width of Cover | 15 13/16" | 402 mm |
| Upstand | 3/4" | 19 mm |
| Tile Coverage | 5.2 ft ² | 0.48 m ² |
| Weight | 6 lbs | 2.8 kg |

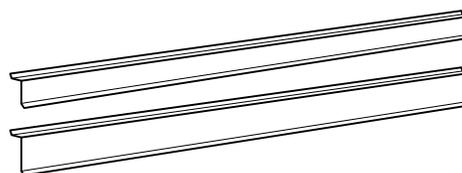


| | | |
|-------------------|-------------------|---------|
| Shake Cap | Part # 300-XXX-02 | |
| Overall Length | 49 3/4" | 1266 mm |
| Length of Cover | 48" | 1220 mm |
| Coverage per Side | 4 1/8" | 105 mm |
| Weight | 2.7 lbs | 1.3 kg |

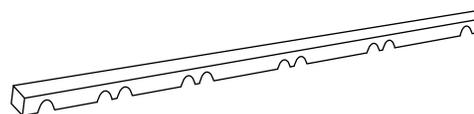


FGW 3" & 5" (Fascia Gable Wall) Part # 200-XXX-13 & Part # 200-XXX-15

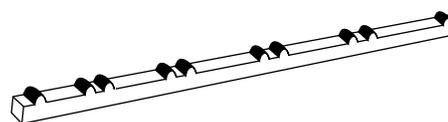
| | | |
|-----------------|---------------|-------------|
| Overall Length | 8' | 2443 mm |
| Length of Cover | 7' 8" | 2340 mm |
| Exposed Face | 3 1/4" & 5" | 83 & 123 mm |
| Kick | 1/2" | 12 mm |
| Return | 3/4" | 19 mm |
| Weight | 3.6 & 4.4 lbs | 1.8 & 2 kg |



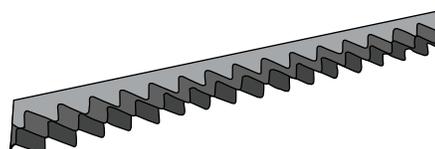
| | | |
|---------------------------|-------------------|---------|
| Ridge Foam Closure | Part # 200-000-17 | |
| Length | 47 1/4" | 1200 mm |
| Width | 3/4" | 19 mm |
| Weight | 1.4 oz | 40 g |



| | | |
|--------------------------|-------------------|---------|
| Eave Foam Closure | Part # 200-000-16 | |
| Length | 47 1/4" | 1200 mm |
| Width | 3/4" | 19 mm |
| Weight | 1.4 oz | 40 g |

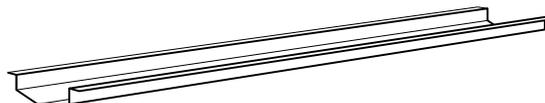


| | | |
|-------------------|------------------------|---------------------------|
| Versa Vent | Part # 200-000-55 | |
| Length per Piece | 10' | 3.05 m |
| Width | 2" | 50.8 mm |
| Thickness | 1" | 25 mm |
| Free Area | 17 in ² /ft | 109.65 cm ² /m |
| Weight per Box | 9 lbs | 4.08 kg |
| Pcs. per Box | 10 | |



Valley Flashing (Common to All) Part # 100-XXX-04

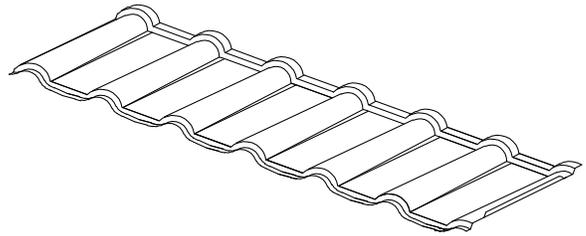
| | | |
|-------------------|---------|---------|
| Overall Length | 8' | 2443 mm |
| Length of Cover | 7' 8" | 2340 mm |
| Horizontal Flange | 1" | 25 mm |
| Gutter Width | 5" | 127 mm |
| Upstand | 1 3/8" | 35 mm |
| Weight | 6.7 lbs | 3 kg |



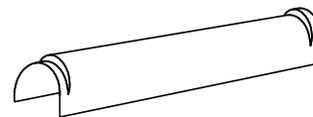
Installation Product Manual

Panels and Accessories Talavera SF

| | Imperial | Metric |
|-------------------------|---------------------|---------------------|
| Talavera SF Tile | Part # 460-XXX-01 | |
| Overall Length | 50 ½" | 1283 mm |
| Length of Cover | 47 ¼" | 1200 mm |
| Width of Cover | 15 13/16" | 402 mm |
| Upstand | 7/8" | 22 mm |
| Tile Coverage | 5.2 ft ² | 0.48 m ² |
| Weight | 6.0 lbs | 2.8 kg |



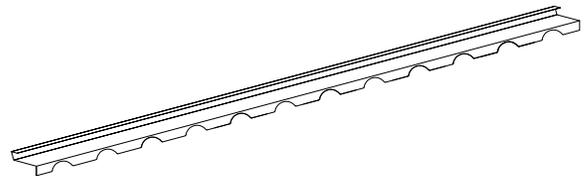
| | | |
|-------------------|-------------------|--------|
| Barrel Cap | Part # 100-XXX-02 | |
| Overall Length | 16 ½" | 420 mm |
| Length of Cover | 15 13/16" | 402 mm |
| Width | 5 ½" | 140 mm |
| Overall Height | 3 ½" | 90 mm |
| Weight | 1.2 lbs | 0.6 kg |



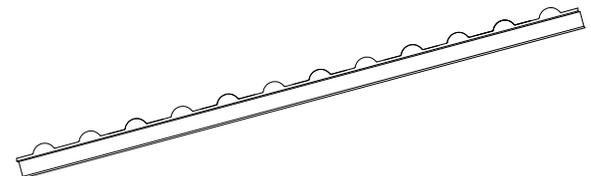
Barrel Cap
Part # 100-XXX-02

End Disc
Part # 100-XXX-05

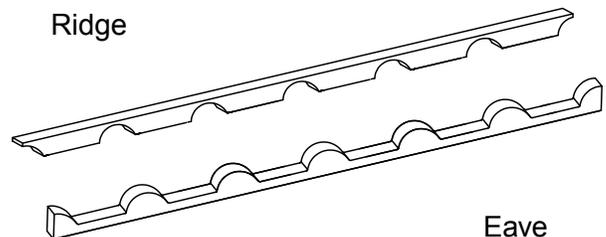
| | | |
|-------------------------|-------------------|---------|
| Talavera Top Row | Part # 460-XXX-12 | |
| Overall Length | 8' | 2443 mm |
| Length of Cover | 7' 10 ½" | 2400 mm |
| Rear Upstand | 1 ½" | 38 mm |
| Horizontal Width | 4" | 101 mm |
| Profile Down Turn | 1 5/8" | 41 mm |
| Weight | 7.5 lbs | 3.4 kg |



| | | |
|------------------------------|-------------------|---------|
| Talavera Bird Edge 3" | Part # 460-XXX-13 | |
| Overall Length | 8' | 2443 mm |
| Profiled Height | 1 ¾" | 44 mm |
| Pitched Return | ¾" | 19 mm |
| Kick | ½" | 12 mm |
| Weight | 3.2 lbs | 1.5 kg |



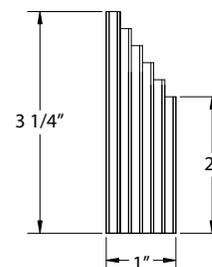
| | | |
|------------------------------|-------------------|---------|
| Talavera Foam Closure | Part # 460-000-17 | |
| Ridge Part # 460-000-17 | | |
| Eave Part # 460-000-16 | | |
| Length | 47 ¼" | 1200 mm |
| Width | ¾" | 19 mm |
| Weight | 1.4 oz | 40 g |



Ridge

Eave

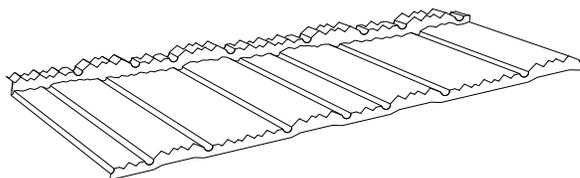
| | | |
|--------------------|--------------------|-------------|
| Cor-A-Vent® | Part # 460-000-56 | |
| Length per piece | 48" | 1219 mm |
| Height | 3 ¼" | 83 mm |
| Width | 1" | 25 mm |
| Ventilation | 10 in ² | NFVA per Ln |



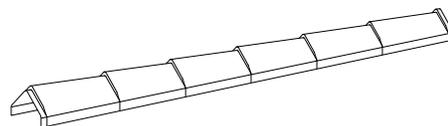
Installation Product Manual

Panels and Accessories Woodshake

| | | |
|-----------------------|---------------------|---------------------|
| Woodshake Tile | Part # 320-XXX-01 | |
| Overall Length | 49 5/8" | 1260 mm |
| Length of Cover | 47 1/4" | 1200 mm |
| Width of Cover | 15 13/16" | 402 mm |
| Upstand | 7/8" | 22 mm |
| Tile Coverage | 5.2 ft ² | 0.48 m ² |
| Weight | 6 lbs | 2.8 kg |

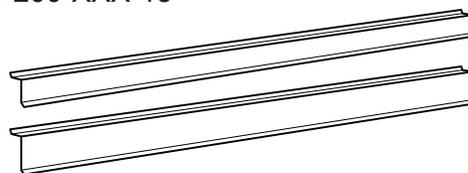


| | | |
|--------------------|-------------------|---------|
| Square Trim | Part # 300-XXX-02 | |
| Overall Length | 49 3/4" | 1266 mm |
| Length of Cover | 47 1/4" | 1220 mm |
| Coverage per Side | 4 1/8" | 105 mm |
| Weight | 2.7 lbs | 1.3 kg |

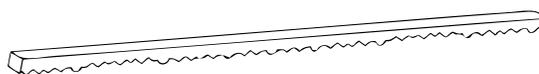


FGW 3" & 5" (Fascia Gable Wall) Part # 200-XXX-13 & Part # 200-XXX-15

| | | |
|-----------------|---------------|-------------|
| Overall Length | 8' | 2443 mm |
| Length of Cover | 7' 8" | 2340 mm |
| Exposed Face | 3 1/4" & 5" | 83 & 127 mm |
| Kick | 1/2" | 12 mm |
| Return | 3/4" | 19 mm |
| Weight | 3.6 & 4.4 lbs | 1.8 & 2 kg |



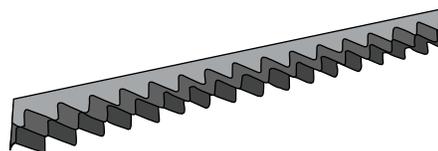
| | | |
|---------------------------|-------------------|---------|
| Ridge Foam Closure | Part # 300-000-17 | |
| Length | 47 1/4" | 1200 mm |
| Width | 3/4" | 19 mm |
| Weight | 1.4 oz | 40 g |



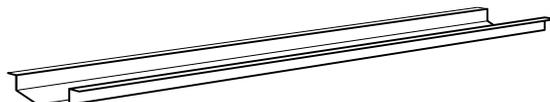
| | | |
|--------------------------|-------------------|---------|
| Eave Foam Closure | Part # 300-000-16 | |
| Length | 47 1/4" | 1200 mm |
| Width | 3/4" | 19 mm |
| Weight | 1.4 oz | 40 g |



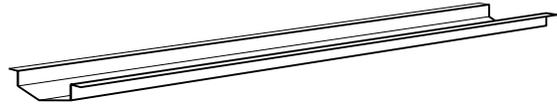
| | | |
|-------------------|-------------------------|---------------------------|
| Versa Vent | Part # 200-000-55 | |
| Length per Piece | 10' | 3.05 m |
| Width | 2" | 50.8 mm |
| Thickness | 1" | 25 mm |
| Free Area | 17" in ² /ft | 109.65 cm ² /m |
| Weight per Box | 9 lbs | 4.08 kg |
| Pcs. Per Box | 10 | |



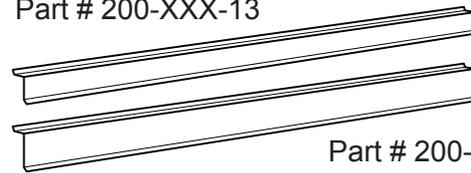
| | | |
|------------------------|-------------------|---------|
| Valley Flashing | Part # 100-XXX-04 | |
| Overall Length | 8' | 2443 mm |
| Length of Cover | 7' 8" | 2340 mm |
| Horizontal Flange | 1" | 25 mm |
| Gutter Width | 5" | 127 mm |
| Upstand | 1 3/8" | 35 mm |
| Weight | 6.7 lbs | 3 kg |



| | | |
|------------------------|-------------------|---------|
| Valley Flashing | Part # 100-XXX-04 | |
| Overall Length | 8' | 2443 mm |
| Length of Cover | 7' 8" | 2340 mm |
| Horizontal Flange | 1" | 25 mm |
| Gutter Width | 5" | 127 mm |
| Upstand | 1 3/8" | 35 mm |
| Weight | 6.7 lbs | 3 kg |

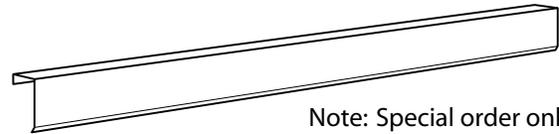


| | | |
|---|-------------------|-------------|
| FGW 3" & 5" (Fascia Gable Wall - Continental has own fascia metal) | Part # 200-XXX-13 | |
| Overall Length | 8' | 2443 mm |
| Length of Cover | 7' 8" | 2340 mm |
| Exposed Face | 3 1/4" & 5" | 83 & 123 mm |
| Kick | 1/2" | 12 mm |
| Return | 3/4" | 19 mm |
| Weight | 3.6 & 4.4 lbs | 1.8 & 2 kg |



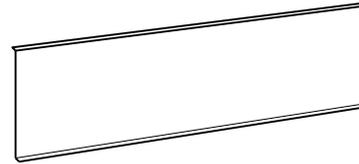
Part # 200-XXX-15

| | | |
|------------------|-------------------|---------|
| Box Barge | Part # 100-XXX-09 | |
| Overall Length | 8' | 2443 mm |
| Length of Cover | 7' 8" | 2340 mm |
| Rear Downturn | 1" | 25 mm |
| Width | 1 3/4" | 45 mm |
| Front Downturn | 4 3/4" | 124 mm |
| Weight | 4.8 lbs | 2.2 kg |

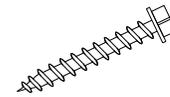


Note: Special order only

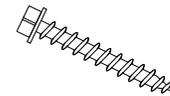
| | | |
|--------------------|------------------|---------|
| All Purpose | Part # 300-XX-08 | |
| Overall Length | 4' 4" | 1321 mm |
| Width | 17" | 432 mm |
| Left/Right Kick | 1/2" | 12 mm |
| Weight | 6 lbs | 2.8 kg |



| | | |
|-----------------------|-------------------|--|
| Standard Screw | Part # 100-XXX-18 | |
| Long Life Coated | | |
| # 9-10 x 1-1/2" | #9-10 x 38 mm | |
| 1/4" Painted Hex Head | 6 mm Hex Head | |



| | | |
|-----------------------|-------------------|--|
| Super Screw | Part # 100-XXX-19 | |
| Long Life Coated | | |
| # 9-10 x 1-1/2" | # 9-10 x 38 mm | |
| 1/4" Painted Hex Head | 6 mm Hex Head | |



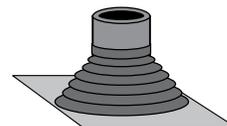
| | | |
|-----------------|-------------------|---------|
| Caulking | Part # 000-000-26 | |
| Size | 10 oz | 284 ml |
| Weight | 1 lb | 0.45 kg |



| | | |
|---------------------------|-------------------|---------|
| Coating Repair Kit | Part # 000-XXX-62 | |
| Allmet Acrylic | | |
| Amount | 4.2 fl oz | 120 ml |
| Weight | 1 lb | 0.11 kg |
| Touch-up Granules | | |
| Weight | 3 lbs | 1.36 kg |



| | | |
|--------------------|--------------------------|--|
| Masterflash | Part # 000-000-33 | |
| Type # 3 | Pipe Size 1/4" - 4"(I.D) | |





Allmet offers Roof Fasteners in Two Levels

#18 – “Standard” 1 1/2” - # 9 - 10

#19 – “Super” 1 1/2” - # 9 - 10

Allmet offers two types of fasteners for our panels installed over battens. A standard carbon screw (“standard”) or a 410 series stainless steel screw (“super”). The “super” screw has a chromium content of 11.5% - 13.5%. Both the “standard” and the “super” screws are magnetic, which allows the use of magnetic sockets making installation easier. Please note magnetic driver bits can leave trace residues on the screws and initiate a premature rusting of the fastener here, particularly when the coating has been damaged.

Both screws are # 9-10 x 1-1/2”, 1/4” hex head, supplied without washer. The screws have a long life corrosion resistant coating applied that resists chipping during installation. However, care must be taken to not overly abuse the screw head during install.

Allmet offers both fasteners in a range of color options to best match panel finish. Please refer to the “color compatibility chart” or your local sales representative for further information.

Protection that’s a Proven Fact!

Both fasteners have survived 30 cycles of the harsh Kesternich SFW 2.0 DIN 50018 test, 1,000 hours of ASTM B117 Salt Spray Test and 1,000 hours of ASTM S2247-94 Humidity Test.

Pull Out Test Results - Average Ultimate Failure Values:

| Test Material | Penetration | Results (lbs) |
|---------------|-------------|---------------|
| SFP # 2 | 1” (inch) | 498 lbs. |

Installation Procedure

1. Use any model screw shooter to 2500 RPM.
2. The following gauges of steel battens are acceptable for use with Allmet screws: 24 ga./22 ga./20 ga.
3. Allmet screws must penetrate a minimum of 1/2” (12 mm) through steel strapping and 1” (25 mm) minimum into the wood strapping to achieve pull out strength.
4. DO NOT OVER TIGHTEN THE SCREWS

NOTE: Please check local code requirements.

Fasteners in Coastal Areas or Regions:

Please note all exposed fasteners used in the installation of Allmet Stone Coated Steel roof products on ocean front properties must be stainless steel fasteners.

Please contact your local sales representative or the technical department for further information.

Description

- High grade rubber-based thermoplastic sealant

Features

- Super flexible (can be applied in winter and summer)
- Excellent Weather and UV Resistance
- No primer required
- Will not pick up dirt
- Can be painted with latex paints
- Will not freeze

General Appearance

- Clear in color
- Homogenous paste without lumps
- Easy to extrude

Limitations

- Do not use over asphalt, poly styrene , silicone or oily surfaces

Storage

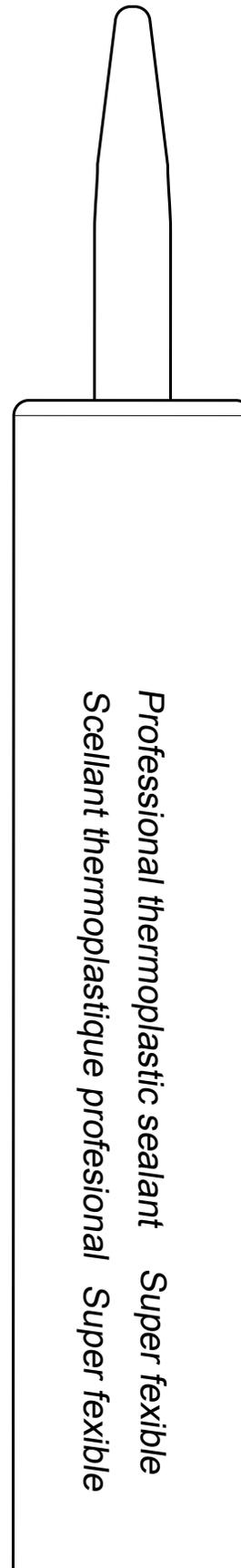
- Store in a dry place where the temperature is between 50° F (10° C) and 86° F (30° C).

Guarantee

- This product is guaranteed to be of top quality and will give full satisfaction and performance if applied according to the manufacturer's direction for usage. This liability is limited to reimbursement of the purchase price if the product proves defective.

Excellent Adhesion to most Substrates

- Steel
- Concrete
- Vinyl
- Aluminum
- Wood
- Fiberglass
- Brick
- Glass



Installation Product Manual

Caulking – Health and Safety

Surface Preparation

- Joint surfaces must be dry and clean, free of dust, soot, asphalt, silicone, loose paint flakes and foreign particles.
- Do not use on materials soluble in solvents such as asphalt, polystyrene, etc.
- Oily metal surfaces should be washed with acetone and dried.
- Clean rusted metal with a metal brush.
- If the depth exceeds 3/8" (10 mm) use a joint backing.

Safety Measures

- This product contains flammable solvents.
- Do not smoke when using this product.
- Work in ventilated conditions.
- If the product is used inside, it is important that during use and while the product is curing to ventilate the air towards the exterior (do not recycle air).
- Eliminate all sparks or flame producing sources and all intense heat sources from or near work place.

Applications

- Cut cartridge spout at a 90° angle slightly wider than the width of desired joint.
- Pierce the aluminum membrane which seals the cartridge inside the nozzle.
- Apply an even pressure with a caulking gun.
- Fill the joint entirely in depth and width.
- The angle between the gun and the joint must be about 45°.
- Seal the joint and make sure that the sealant exceeds by at least 1/8" (3 mm) the width of the joint opening to be sealed.
- For cleaning use mineral spirit.

Coverage: linear feet per cartridge

| | | | | | |
|-------------|-----|------|------|------|------|
| Depth (in.) | 1/4 | 3/8 | 1/2 | 5/8 | |
| Width (in.) | | | | | |
| | 1/4 | 31 | 20.7 | 15.5 | 12.4 |
| | 3/8 | 20.7 | 13.8 | 10.3 | 8.3 |
| | 1/2 | 15.5 | 10.3 | 7.7 | 6.6 |

Notice

- For applications on substrates not specified on this technical data sheet, consult our technical department.

Recommended Storage Temperature:

Minimum: 50° F (10° C)
Maximum: 86° F (30° C)

Service Temperature:

Minimum: -13° F (25° C)
Maximum: 122° F (50° C)

Recommended Minimum Application Temperature:

Surface: -13° F (-25° C)
Product: 50° F (10° C)

Recommended Maximum Application Temperature:

Surface: 104° F (40° C)
Product: 86° F (30° C)

Approximate Flash Point:

80° F (26° C)

Restrictions

- Avoid use where solvents could taint food or other odor sensitive products.
- Do not use on insulating boards which could be affected by solvents.
- Never apply onto substrates having previously received an asphalt or coal tar product (coating, adhesive, etc.)
- Do not apply onto damp or frozen surface.
- Does not withstand traffic.
- Does not withstand immersion.

Caution

- Make sure joint variation does not exceed product elasticity.
- Make sure that thermal glasses do not present cutting oil on the surface.
- In order to facilitate the application, store product at a fairly warm temperature during the cold season.
- Product drying time depends on temperature and ventilation.
- Drying time increases when temperature decreases.

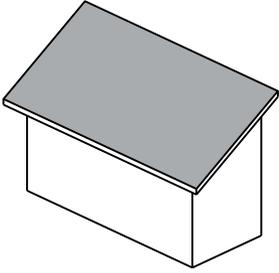
First Aid

- Eye Contact - This product contains petroleum distillates. If splashing occurs, wash thoroughly with water for at least 15 minutes; contact a physician.
- Skin Contact - Wash with vegetable oil following with soapy water and rinse.
- Ingestion - Contains petroleum distillates, do not induce vomiting. Immediately contact a physician.
- Vapor Incommodation - Sensitive people may be incommodated by solvent vapors when used indoors. Take the person outside and give him some fresh air. If discomfort persists, consult a physician.
- Fire - This product is flammable when applied and burns when dry. Use water or Class A fire extinguishers in case of fire.
- Safety - For more information on safety utilization of product, consult the material safety data sheet (MSDS) before using.

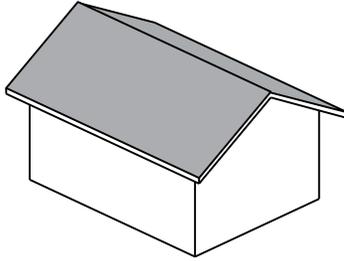
Estimating

Section Two

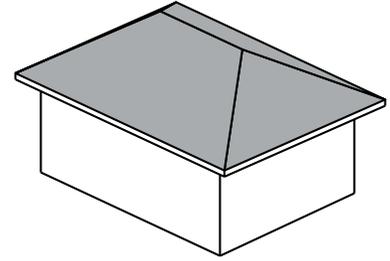
Five Basic Styles of Roofs



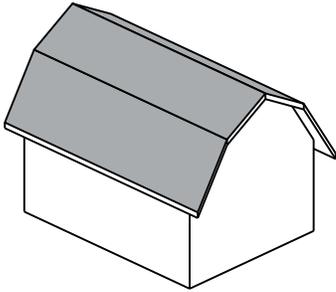
Shed



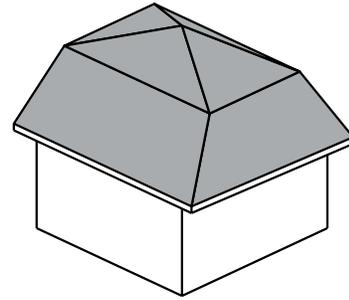
Gable



Hip

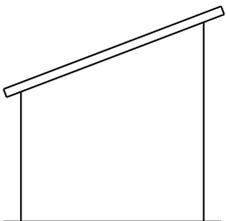


Gambrel

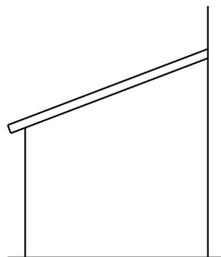


Mansard

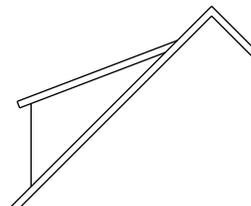
Four Types of Shed Roofs



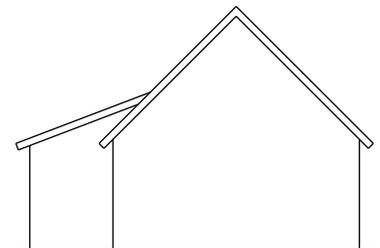
Independent Building



Porch Roof



Shed Dormer Roof



Lean-To Roof

Installation Product Manual

Basic Steps

Simplistic as they may seem, following these few key steps will minimize your chances of errors.

1. Take accurate measurements – Never “guesstimate” and if estimating off drawings never “scale.”
2. Draw a proper roof plane to correct proportions. Indicate slope direction and dimensions (see typical sketch below).
3. Divide the roof into rectangular section and label. This will further confirm that all areas have been included.
4. Identify roof junction as per table below. This will assist in identifying the proper type and amount of accessories and wastes tile.
5. Review the product manual and video until you have a complete comprehension of the system.
6. Remember – each section usually has two sides.
7. Remember – a typical roof section contains the same amount of square feet regardless of having hipped or gabled ends.

R - Ridge

H - Hip

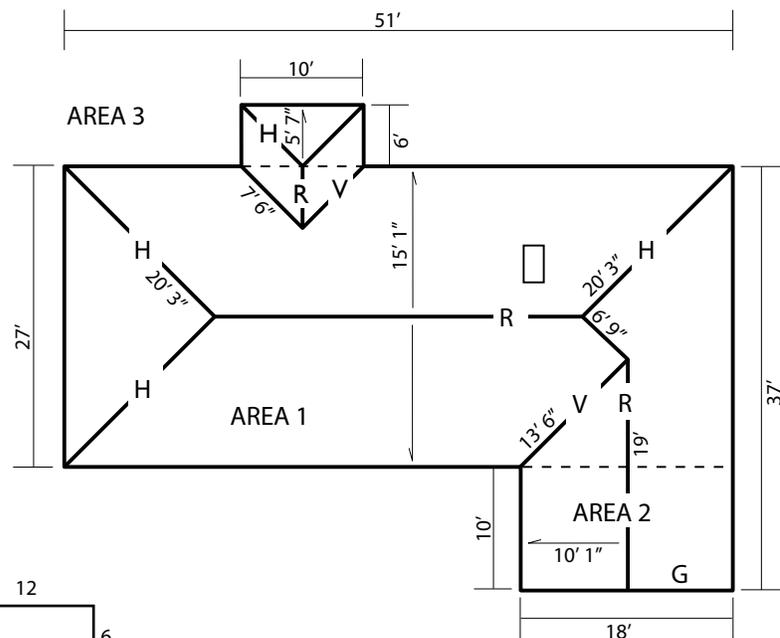
V - Valley

W - Wall

G - Gable

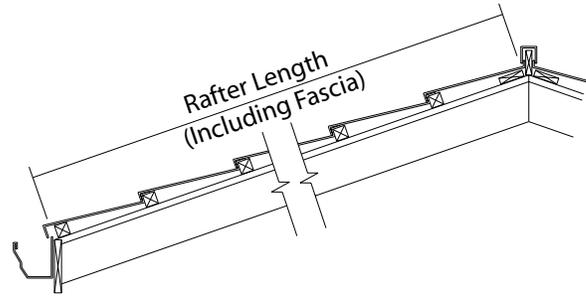
Pitch $\frac{12}{6}$

Pitch $\frac{12}{6}$



Tile Required by Rafter Length

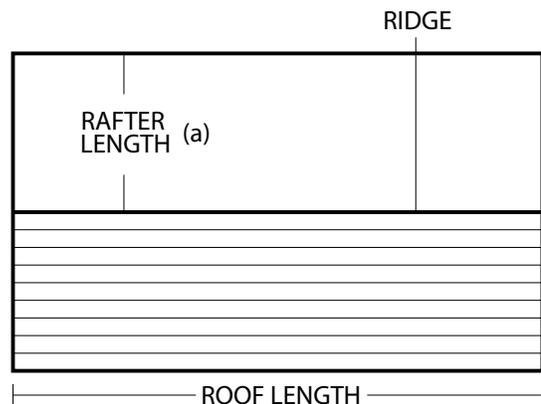
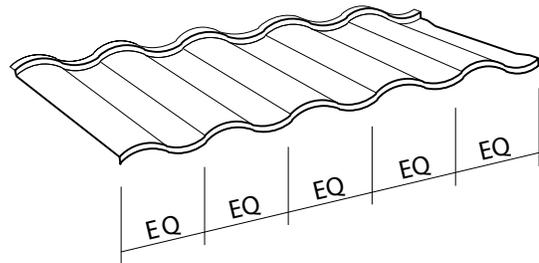
The Allmet Tile lays 15 13/16" or 402 mm. A minimum of 3/4" or 19 mm of overhang is required at the eaves, hence the first course allotment is 15" or 386 mm, additionally, an allowance must be made for bending up of the top course if square ridge/hip trim is utilized. Refer to the convenient tile coverage chart on page 24 for converting rafter lengths to tile courses.



Note: If rafter lengths are unknown then refer to conversion tables on pages 24 and 25. Here building width and pitch will yield the appropriate rafter length.

Tile Required By Roof Length

The tile covers 47 1/2" or 1200 mm in length. Again refer to the tile coverage chart on page 24 for the required amount of tiles. Understand that the Allmet Tile has pattern repeats in its length so some waste must be allotted for. A minimum of .2 of a tile should be allowed as waste for gabled end conditions. If the roof section has a hip or valley end then use the simplistic waste formulas explained later which convert lineal feet of hip and valley into an appropriate amount of waste tiles.



Waste Tile Calculation

Theoretical

1. The diagonal cut for a hip or valley generates various degrees of waste depending on pitch. A 0/12 pitch (flat roof) being a 45° angle and a vertical wall being a 90° angle hence the lower the pitch the greater the angle cut and the greater the waste.
2. As hips and valleys run in opposite but equal angles, the cut piece from a hip would fit a valley or visa-versa.
3. Waste for cuts needs only to be calculated on an amount obtained by subtracting the lesser from the greater of either hip or valley.

Practical

1. Waste tile must be allotted for the pattern repeat on the Allmet Tile on both hips and valleys.
2. Waste tile must be allotted for bending up and down at junctions.

Compile the lengths of hip and valley by actual measurements or by utilizing the conversion tables on page 24. On pitches up to 4:12 multiply the lineal footage of hip or valley x 0.4 to calculate the appropriate amount of waste tiles. On pitches greater than 4:12 multiply by 0.3.

Note: On roofs containing both hips and valleys you need only apply this factor to the greater amount of either hip or valley.

Example 1 - 50 L.F. of hip @ 6:12 pitch
 $50 \times 0.3 = 15$ waste tiles

Example 2 - 30 L.F. of valley @ 5:12 pitch
 $30 \times .03 = 9$ waste tiles

Example 3 - 80 L.F. of hip and 60 L.F. of valley
@ 4:12 pitch
 $80 \times .04 = 32$ waste tiles

Waste Tile Calculations/Accessories

Gables

A minimum allowance of 0.2 of a tile per course is needed for terminating the tiles at each end and should be added to your number of "tiles per roof length" calculations on the main roof tiles.

Skylights and Chimneys

Typically no allowances are made to either debit or credit tiles, as the tiles saved equals the tiles wasted on normal sized protrusions.

Dormers

The field tiles required is calculated in with the main section calculations. The hip or valley waste should be included in the overall hip/valley waste factoring. Allowance though should be made for the overhang with considerations to top coursing waste. Generally a minimum of 16" should be allotted for overhang. A simplistic method is to take the total lineal feet of overhang and divide by 4 to equal the extra tile required (1 tile per lineal meter of overhang).

Barrel Caps

Gables - Allow 1 barrel cap per course or part course on gabled ends. If the top course is near a full course of tile an extra cap should be allotted on each side for coping.

Ridge/Hip - Take the total lineal footage of ridge/hip and divide by 1.31 to convert to the number of barrel caps required. Remember to allow 3 additional caps for each junction of a ridge with two hips. (For metric take the total lineal meters and divide by 0.4)

Fascia Gable Wall (FGW)

This product is used as Eave and Gable trim to cover the roof build up from the batten strapping. Additionally it is formed to use as a Wall flashing. Allow a minimum of 4" for each lap and try to eliminate the use of short pieces to finish a run.

Installation Product Manual

Waste Tile Calculations / Accessories

Accessories

Vented Top Row

Remember this product is used not only at the ridge but in some roof to wall installations and with skylights as well. Although this product covers two tile lengths (7' 10 1/2" or 2400 mm) it is profiled and hence additional product must be allotted for profile repeats at each termination.

Valley

Do not forget to allow six (6) inches for coping at the fascia, four (4) inches for each lap, and enough material to cut and fold over at the top. In addition, try to minimize the use of short pieces.

Bird Edge

Similar to vented top row, the profiling of this product will require an allotment of up to approximately one foot at each termination. In addition, try to minimize the use of small pieces especially as starters. Therefore, do not be too tight on your calculations.

Ventilation

Most building codes require a minimum of 1 ft² of free ventilation for every 300 ft² of heated area of a dwelling. This requirement must be provided equally between ridge and eaves to be most effective. Please check the local building code requirements.

Fasteners

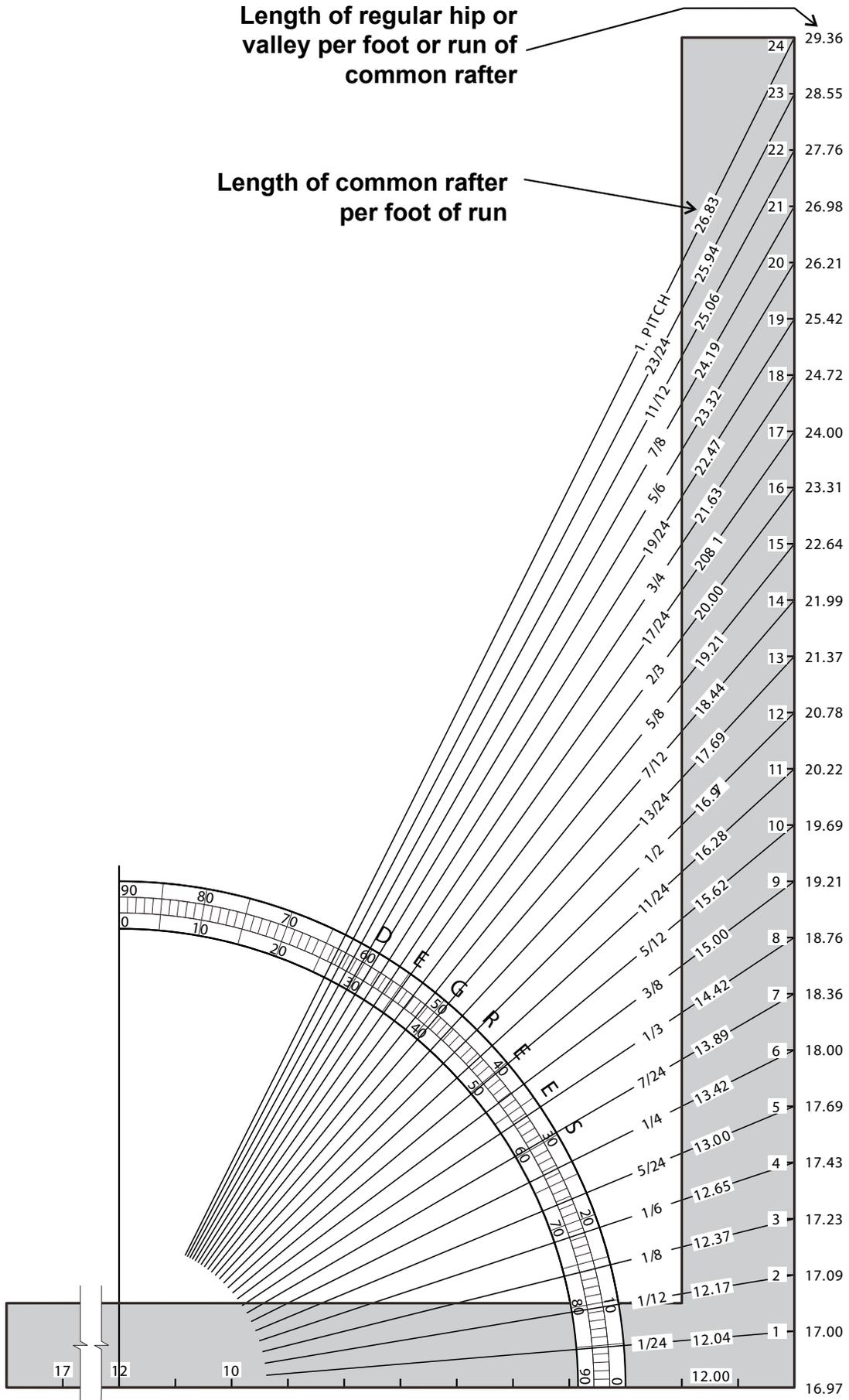
Allot 6 fasteners for each tile required. This will cover requirements for accessory items. 1 1/2 extra fasteners per tile must be allowed for in areas of high wind uplift.

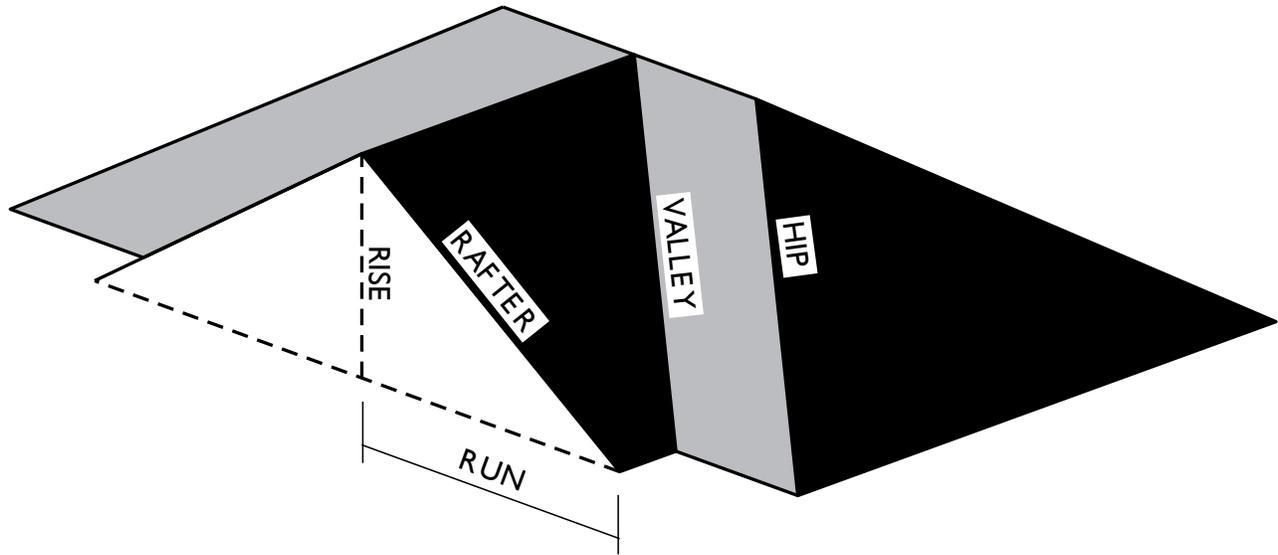
Battens

Average usage is approximately 4.5 lineal feet or 1.37 lineal meters per tile.

Installation Product Manual

Pitch to Degree Scale





| PITCH | | $\text{RUN} \times \text{RAFTER FACTOR} = \text{RAFTER LENGTH} \times \text{HIP/VALLEY FACTOR} = \text{HIP/VALLEY LENGTH}$ | | | | |
|--------|---------|--|--------|----------------------|-------|--------------------------------|
| ? / 12 | DEGREES | | | | | |
| 1 | 4.50 | | 1.0035 | | 1.42 | |
| 1 1/2 | 7 | | 1.0078 | | 1.41 | |
| 2 | 9.50 | | 1.0138 | | 1.408 | |
| 2 1/2 | 11.75 | | 1.0215 | | 1.402 | |
| 3 | 14 | | 1.0310 | | 1.396 | |
| 3 1/2 | 16.25 | | 1.0412 | | 1.39 | |
| 4 | 18.50 | | 1.0541 | | 1.39 | |
| 4 1/2 | 20.50 | | 1.0680 | | 1.38 | |
| 5 | 22.50 | | 1.0833 | | 1.37 | |
| 5 1/2 | 24.50 | | 1.1000 | | 1.36 | |
| 6 | 26.50 | | 1.1180 | | 1.35 | |
| 6 1/2 | 28.25 | | 1.1373 | | 1.34 | |
| 7 | 30.25 | | 1.1577 | | 1.33 | |
| 7 1/2 | 32 | | 1.1793 | | 1.32 | |
| 8 | 33.75 | | 1.2019 | | 1.30 | |
| 8 1/2 | 35.25 | | 1.2255 | | 1.29 | |
| 9 | 37 | | 1.2500 | | 1.28 | |
| 9 1/2 | 38.50 | | 1.2754 | | 1.27 | |
| 10 | 40 | | 1.3017 | | 1.263 | |
| 10 1/2 | 41.25 | | 1.3288 | | 1.25 | |
| 11 | 42.50 | | 1.3566 | | 1.24 | |
| 11 1/2 | 43.75 | | 1.3851 | | 1.23 | |
| 12 | 45 | | 1.4142 | | 1.226 | |
| 14 | 49.50 | | 1.5366 | | 1.195 | |
| 16 | 53.25 | | 1.6666 | | 1.168 | |
| 18 | 56.25 | | 1.8028 | | 1.145 | |
| 20 | - | | 1.9440 | | 1.125 | |
| | | RAFTER RUN | | RAFTER LENGTH | | HIP & VALLEY LENGTH |

RAFTER LENGTH

| *IMPERIAL | NUMBER OF COURSES | *METRIC |
|-------------|-------------------|---------|
| 1' 2 1/8" | 1 | 0.360 m |
| 2' 5 7/8" | 2 | 0.760 m |
| 3' 9 5/8" | 3 | 1.160 m |
| 5' 1 3/8" | 4 | 1.560 m |
| 6' 5 1/8" | 5 | 1.960 m |
| 7' 8 7/8" | 6 | 2.360 m |
| 9' 0 5/8" | 7 | 2.760 m |
| 10' 4 3/8" | 8 | 3.160 m |
| 11' 8 1/8" | 9 | 3.560 m |
| 12' 11 7/8" | 10 | 3.960 m |
| 14' 3 5/8" | 11 | 4.360 m |
| 15' 7 3/8" | 12 | 4.760 m |
| 16' 11 1/8" | 13 | 5.160 m |
| 18' 2 7/8" | 14 | 5.560 m |
| 19' 6 5/8" | 15 | 5.960 m |
| 20' 10 3/8" | 16 | 6.360 m |
| 22' 2 1/8" | 17 | 6.760 m |
| 23' 5 7/8" | 18 | 7.160 m |
| 24' 9 5/8" | 19 | 7.560 m |
| 26' 1 3/8" | 20 | 7.960 m |
| 27' 5 1/8" | 21 | 8.360 m |
| 28' 8 7/8" | 22 | 8.760 m |
| 30' 0 5/8" | 23 | 9.160 m |
| 31' 4 3/8" | 24 | 9.560 m |
| 32' 8 1/8" | 25 | 9.960 m |

*NOTE: DIMENSION ALLOWS FOR OVERHANG AND RIDGE BENDS

OVERALL ROOF LENGTH

| IMPERIAL | NUMBER OF COURSES | METRIC |
|-------------|-------------------|----------|
| 3' 11 1/4" | 1 | 1.200 m |
| 7' 10 1/2" | 2 | 2.400 m |
| 11' 9 3/4" | 3 | 3.600 m |
| 15' 9" | 4 | 4.800 m |
| 19' 8 1/4" | 5 | 6.000 m |
| 23' 7 1/2" | 6 | 7.200 m |
| 27' 6 3/4" | 7 | 8.400 m |
| 31' 6" | 8 | 9.600 m |
| 35' 5 1/4" | 9 | 10.800 m |
| 39' 4 1/4" | 10 | 12.000 m |
| 43' 3 3/4" | 11 | 13.200 m |
| 47' 3" | 12 | 14.400 m |
| 51' 2 1/4" | 13 | 15.600 m |
| 55' 1 1/2" | 14 | 16.800 m |
| 59' 0 3/4" | 15 | 18.000 m |
| 63' 0" | 16 | 19.200 m |
| 66' 11 1/4" | 17 | 20.400 m |
| 70' 10 1/2" | 18 | 21.600 m |
| 74' 9 3/4" | 19 | 22.800 m |
| 78' 9" | 20 | 24.000 m |
| 82' 8 1/4" | 21 | 25.200 m |
| 86' 7 1/2" | 22 | 26.400 m |
| 90' 6 3/4" | 23 | 27.600 m |
| 94' 6" | 24 | 28.800 m |
| 98' 5 1/4" | 25 | 30.000 m |

Installation Product Manual

Example

| | | | | |
|-----------------------------|---------------|--|--|------------|
| Tiles | Area 1 | Rafter Length 15' 1" = 12.0 Roof Length 51' = x $\frac{13.2}{158.4}$ | Courses (15' 7 3/8") Tiles x 2 Sides = 316.8 tiles | 317 |
| | Area 2 | Rafter Length 10' 1" = 8.0 Roof Length 10' = x $\frac{2.8}{22.4}$ | Courses (10' 4 3/8") Tiles x 2 Sides = 44.8 tiles | 45 |
| | Area 3 | Rafter Length 5' 7" = 5.0 Roof Length 6' = x $\frac{1.8}{9.0}$ | Courses (6' 5/8") Tiles x 2 Sides = 10 tiles | 317 |
| | Waste | (82' 6" of Hip and 28' 6" of Valley at 6:12 pitch) Use $82.5 \times .3 = 25$ wasted tiles | | 25 |
| Total Tiles required | | | | 405 |

| | | |
|----------------------------|---|------------|
| Barrel Caps | 16 Courses of Gable + 2 for cuts = 18 132 L.F. of ridge/hip $\div 1.31 = 101 + 9$ for cuts = 110 | 110 |
| Total Caps required | | 128 |

Valley 28' 6" of Valley $\div 7.75 = 3.7$ or 4 pcs.

Bird Edge 170' or eave $\div 7.75 + 1$ for cuts = 23 pcs.

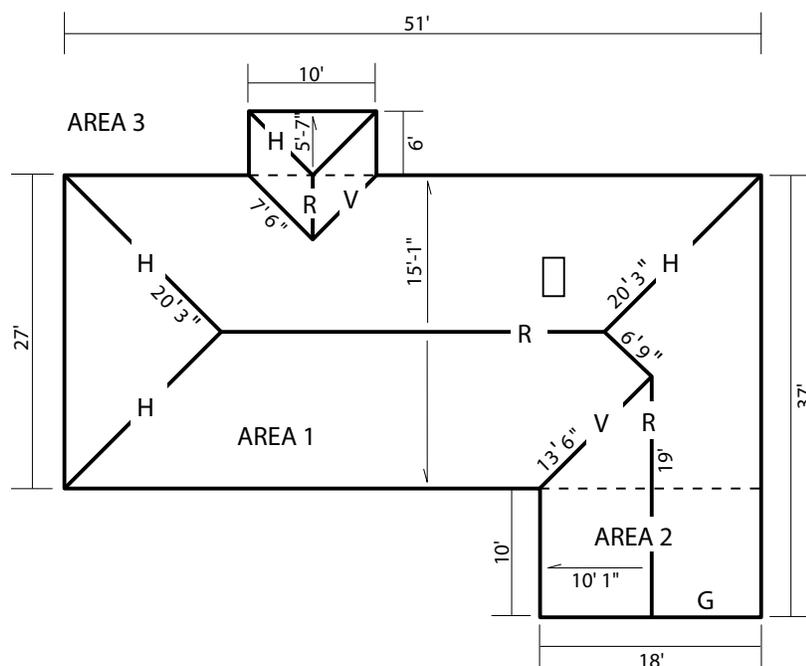
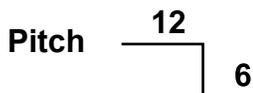
R - Ridge

H - Hip

V - Valley

W - Wall

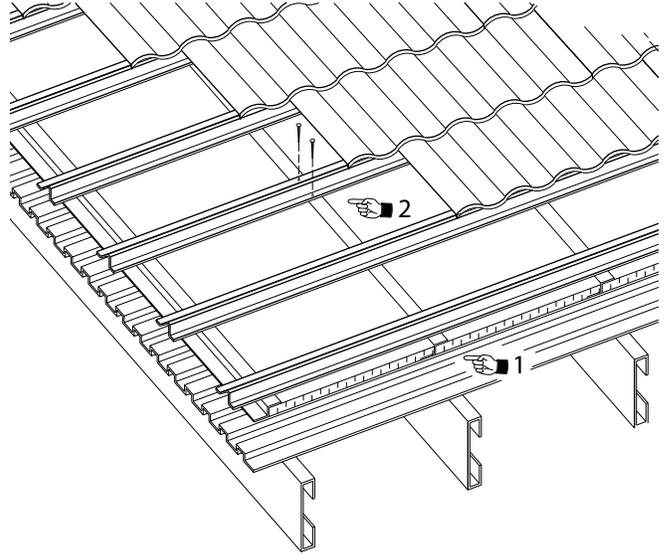
G - Gable



Horizontal Decking

Generally, all aspects of metal framing are similar to wood framing. Some installations require insulation so a standard “Z” sub-girt is used (note 1) to fasten the insulation to the decking, The metal batten is then fastened to the rafter or “Z” girt with 2 fasteners at each junction (note 2). If insulation is not required, then vertical strapping of some nature needs to be installed to transfer the loads equally across the decking and provide for proper fastening locations. Care must be taken to ensure proper fastener type, quantity, and location. Please consult a professional engineer to calculate these loads.

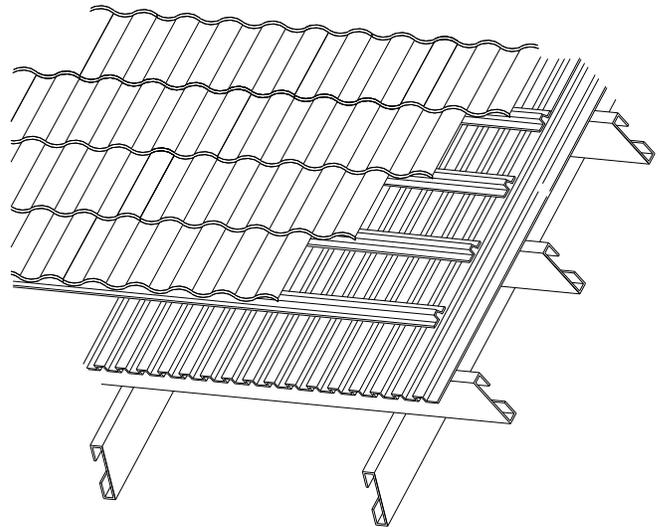
Note: Custom make batten spacers to fit the metal batten for best results.



Vertical Decking

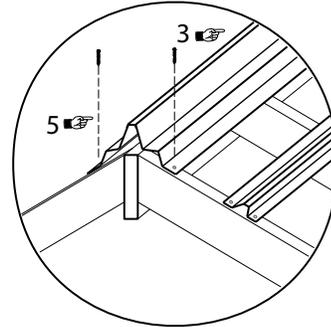
Horizontal batten connection works well, however, care must be taken to ensure that the proper fastener type, quantity, and its location is used. If a rigid installation board is required over the decking, the batten must have a seat area large enough to spread the load and fasteners. The fastener used must be strong and long enough to connect through to the deck and carry the loads. Please consult a professional engineer to calculate these loads.

NOTE: Steel decking is usually used as a structural part of the building and although Allmet has completed various engineering calculations and specific tests generally around product fastened at 24” centers, it cannot make representations on specific point loadings and screw pullouts to meet the required wind uplifts etc. This is a responsibility of the projects design engineer.



Barrel Trim, Ridge Hip

The two piece metal ridge-hip backer is used to frame out the ridges for an unventilated Continental installation (note 3) and/or hips (note 4) to accept the barrel cap trim. Stitch screw the two pieces of metal hip backer together with one screw per length per side. This product is fastened with screw through each lower flange at each rafter junction (note 5). The hip backer is available vented on request.

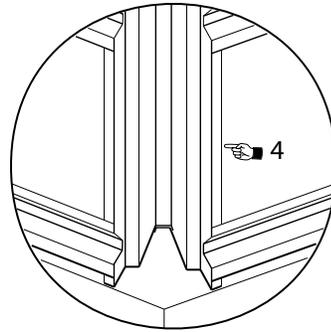


Square Trim

If square trim is used then a custom hat profile should be fabricated to suit the individual job need.

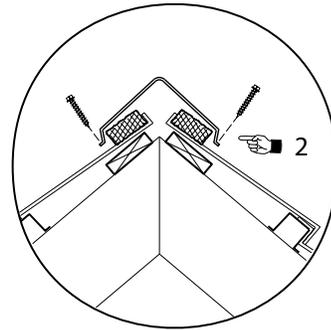
Vented Ridge

Bend and cut the top course of tile so as to leave a 1" (25mm) gap and a 1/2" (12mm) upstand centered on the ridge when ventilation is required (note 2). Place a strip of VersaVent down each side of the ridge and place the shake cap over. Fasten the cap on each side down through to the 1" (25mm) strapping (note 2).

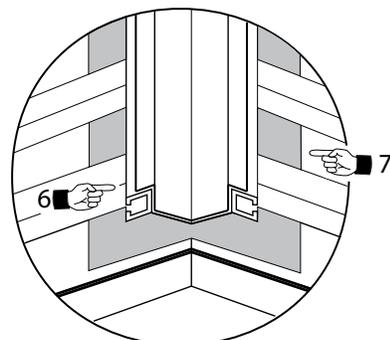


Valley Framing

Valleys framed in metal are similar to the wood framing only a "C" channel is utilized along each side of the valley in lieu of a 2" x 2" (note 6). The metal hat channels used for strapping are then terminated in the "C" and fastened with a stitch screw. For conditions that require an underlayment over open framing a 36" wide 26 gauge galvanized metal pan flashing is installed up the center of the valley prior to roof battening (note 7) and it is recommended to line the top with an ice and water shield to ensure that any fasteners self seal.



Note: Screw performance varies by gauge of material.



Installation Product Manual

Metal Framing Metal Batten Snow Loading Guide

The following table is provided as a general reference tool only to provide a guide to maximum allowed spans for 26 gauge 1 1/2" galvanized metal hat channels. The spans shown were based on the following data and reference documents as listed below.

1. Snow loads shown are ground snow loads as per table 2.5.1.1., O.B.C., 1990. No increase loading due to snow accumulation was considered. Reference sentence 7, Article 4.1.7.1 O.B.C., 1991.
2. Calculations are based on a fixed 'Ground Snow Load' of 0.4 Kpa. See table 2.5.1.A O.B.C., 1991.
3. Roof slope is equal to or less than 30 degrees.
4. A dead load of 0.0623 Kpa for the Allmet roof tiles was used.

Metric

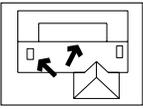
| Rafter Spacing | 400 | 600 | 800 | 100 |
|-----------------|------|-----|-----|-----|
| Snow Load (Kpa) | | | | |
| 0.70 | 1093 | 892 | 773 | 691 |
| 0.80 | 1052 | 859 | 744 | 665 |
| 0.90 | 1015 | 829 | 718 | 642 |
| 1.00 | 982 | 802 | 694 | 621 |
| 1.10 | 952 | 777 | 673 | 602 |
| 1.20 | 925 | 755 | 654 | 585 |
| 1.30 | 900 | 735 | 636 | 569 |
| 1.40 | 876 | 716 | 620 | 554 |
| 1.50 | 855 | 698 | 605 | 541 |
| 1.60 | 835 | 682 | 590 | 528 |
| 1.70 | 816 | 667 | 577 | 516 |
| 1.80 | 799 | 652 | 565 | 505 |
| 1.90 | 782 | 639 | 553 | 495 |
| 2.00 | 767 | 626 | 542 | 485 |
| 2.10 | 753 | 614 | 532 | 476 |
| 2.20 | 739 | 603 | 522 | 467 |
| 2.30 | 726 | 593 | 513 | 459 |
| 2.40 | 713 | 583 | 504 | 451 |
| 2.50 | 702 | 573 | 496 | 444 |
| 2.60 | 690 | 564 | 488 | 437 |
| 2.70 | 680 | 555 | 481 | 430 |
| 2.80 | 670 | 547 | 474 | 424 |
| 2.90 | 660 | 539 | 467 | 417 |
| 3.00 | 651 | 531 | 460 | 411 |

Imperial

| Rafter Spacing | 400 | 600 | 800 | 100 |
|-----------------|-------|-------|-------|-------|
| Snow Load (Kpa) | | | | |
| 10.00 | 46.98 | 38.36 | 33.22 | 29.71 |
| 15.00 | 42.37 | 34.59 | 29.96 | 26.79 |
| 20.00 | 38.89 | 31.75 | 27.50 | 24.60 |
| 25.00 | 36.15 | 29.52 | 25.56 | 22.86 |
| 30.00 | 33.92 | 27.69 | 23.98 | 21.45 |
| 35.00 | 32.05 | 26.17 | 22.66 | 20.27 |
| 40.00 | 30.47 | 24.87 | 21.54 | 19.27 |
| 45.00 | 29.09 | 23.75 | 20.57 | 18.40 |
| 50.00 | 27.89 | 22.77 | 19.72 | 17.64 |
| 55.00 | 26.83 | 21.90 | 18.97 | 16.97 |
| 60.00 | 25.87 | 21.13 | 18.30 | 16.36 |
| 65.00 | 25.02 | 20.43 | 17.69 | 15.82 |
| 70.00 | 24.24 | 19.79 | 17.14 | 15.33 |
| 75.00 | 23.53 | 19.21 | 16.64 | 14.88 |
| 80.00 | 22.88 | 18.68 | 16.18 | 14.47 |
| 85.00 | 22.28 | 18.19 | 15.76 | 14.09 |

Installation

Section Three



Main Framing

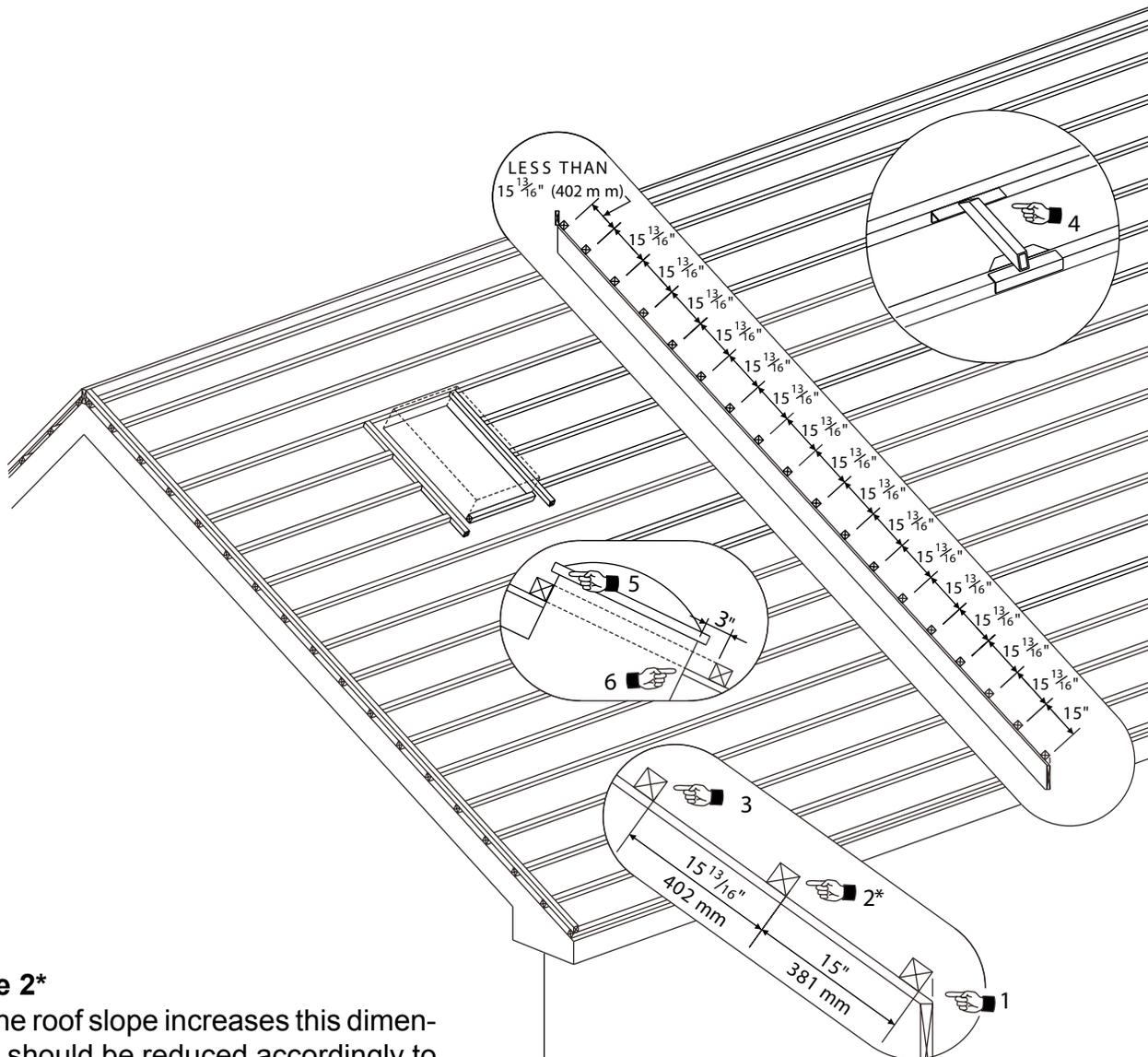
The first batten should be installed with the top corner plumb with the fascia (note 1). The second batten is installed by chalking a straight line 15" (381 mm) (max.) from the lower edge of the first batten (note 2). The remaining battens are installed at 15 13/16" (402 mm) centers (note 3). This spacing is crucial to obtain a tight, proper panel fit. The most accurate method is to use the "Batten Spacer" (note 4) which will lock onto a fastened batten and hold spacing while the next batten is butted to the spacer and fastened.

Skylight Framing

Butt the main tile battens to the sides of the skylight. Run blocking along the top and bottom to support the bent tile and flashing (note 5). Ensure the curb is high enough. If the skylight cannot be raised with extra large units, we recommend framing for Valley Metal down each side and across the top (note 6).

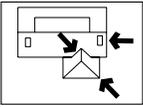
Note: As the roof slope increases this dimension should be reduced accordingly to allow the front lip of the panel to clear the fascia.

Note: Check with local building codes to ensure compliance of methods of fastening battens.



Note 2*

As the roof slope increases this dimension should be reduced accordingly to allow the front lip of the panel to clear the fascia.



Installation Product Manual

Batten Framing Valley, Hips, Chimney

Valley

Two battens are installed 5" (127 mm) apart, centered on the valley (note 1). The batten spacer positioned sideways guarantees accurate spacing.

Hips

A 1" (25 mm) to 1 1/2" (38 mm) wide board, 4 1/2" (114 mm) high is centered on the hip on edge. Panel battens are butted to this board then a batten is run parallel on each side over the battens (note 2). A 2" x 4" ripped center on a 20° ± angle will produce better results for this application (note 3).

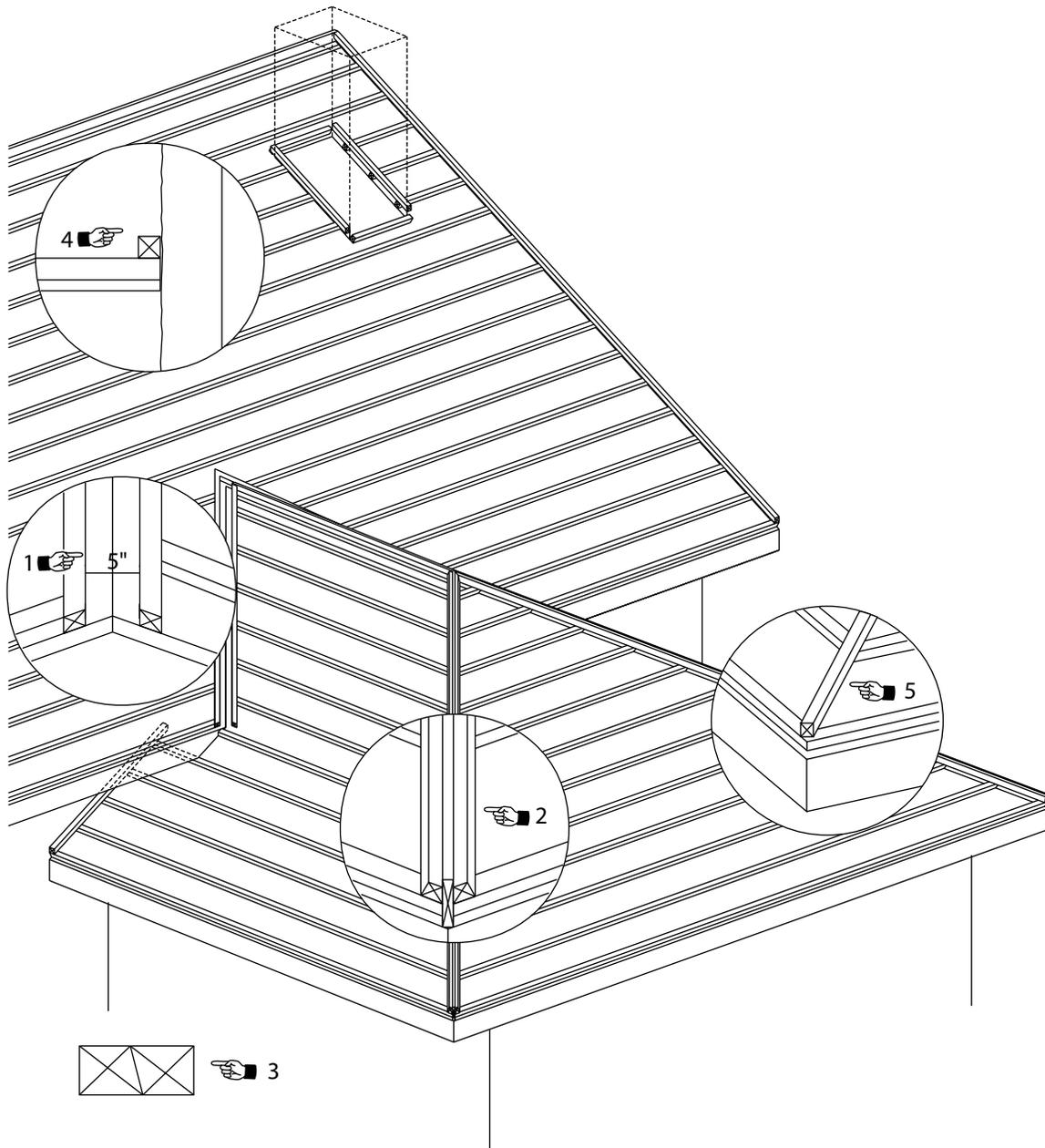
Chimney

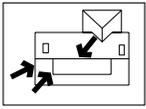
Butt the horizontal battens to the sides, then place an additional batten across the top and bottom. A batten is then fastened to each side of the chimney on top of the horizontal battens. (Note 4)

Hips - (Square – non-venting)

A 2" x 2" batten is placed on top of the horizontal battens centered on the hip (note 5).

Note: Check with local building codes to ensure compliance of methods of fastening battens.





Installation Product Manual

Batten Framing Ridge (Round), Rake (Round & Finished), Sidewall

Ridge Framing

A 1" - 1 1/2" (25 - 38mm) wide board 4 1/2" (114mm) high is fastened on edge, center of ridge (note 1). The last course of batten is ran parallel and tight against this board (note 2). Again a 2" x 4" ripped center on a 20°± angle will produce superior results. Some installers prefer to place an additional 1" (25 mm) backer board in front of the batten to rest the final course of panels on as they are generally cut and bent and have no back lip to rest the panel on (note 3).

Rake Framing – (Round)

The main panel battens are terminated flush with the fascia (note 4). A batten is then placed up the rake over the main battens set in 2" (50 mm) from the fascia (note 5).

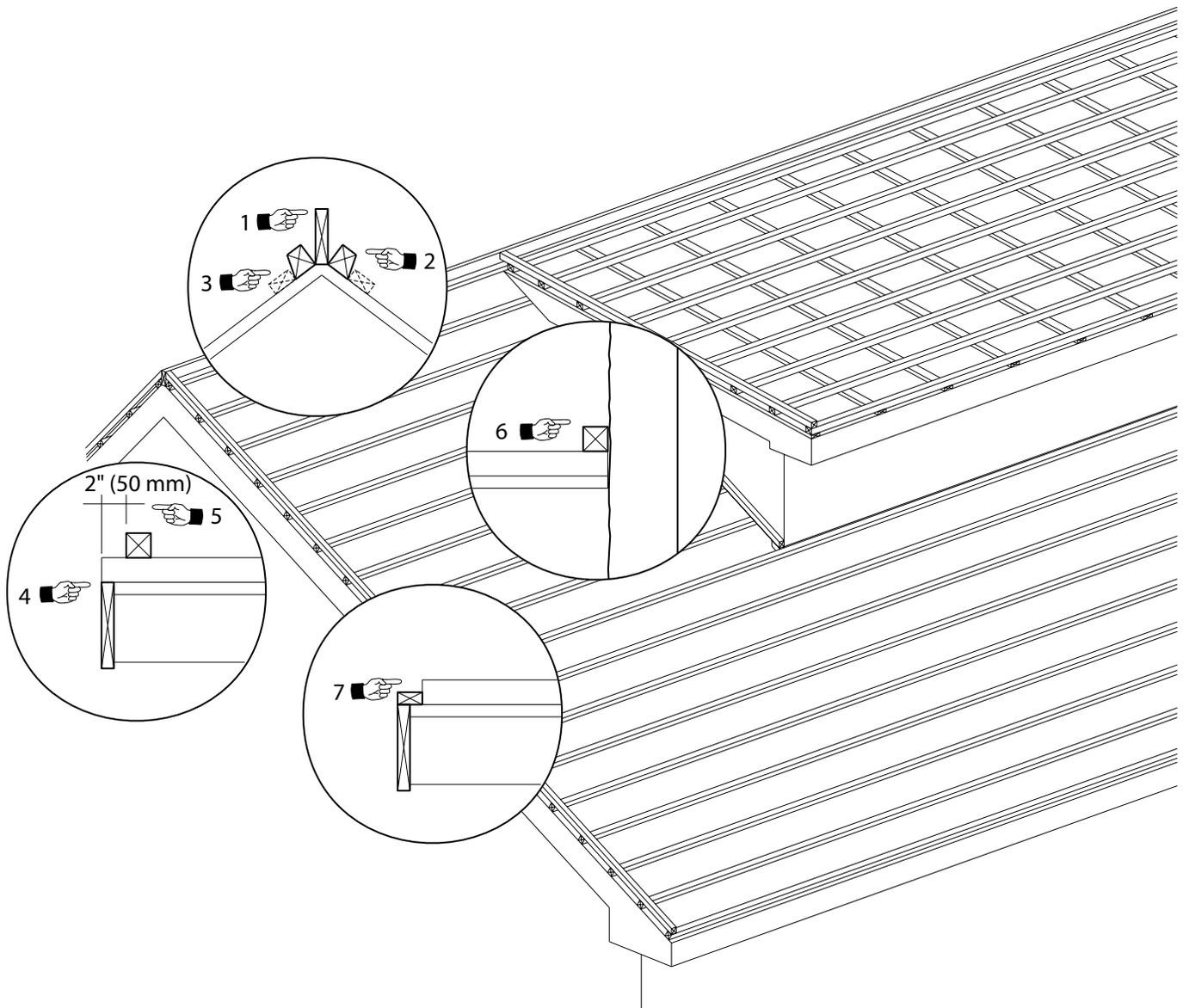
Sidewall Framing

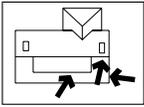
The main panel battens are terminated against the vertical wall. A batten is then fastened against the wall over the battens (note 6). This technique can also be used for sides of chimneys.

Finished End Detail – Gable

A 1" x 2" (25 x 50 mm) is fastened up the gable flush with the fascia. The main panel battens are terminated tight to the 1" x 2" (note 7).

Note: Check with local building codes to ensure compliance of methods of fastening battens.





Installation Product Manual

Batten Framing Ridge (Ventilating), Ridge (Square), Rake (Square), Low Slope

Note: Please refer to local code requirements and the applicable approval report for fastener sizes, quantities and other requirements.

Ridge Framing – (Ventilating)

A 1" (25 mm) board is laid parallel with the ridge on each side leaving a 1" (25 mm) minimum air-space (note 6). On a retrofit application, slot the sheathing to allow for air flow.

Ridge Framing – (Square)

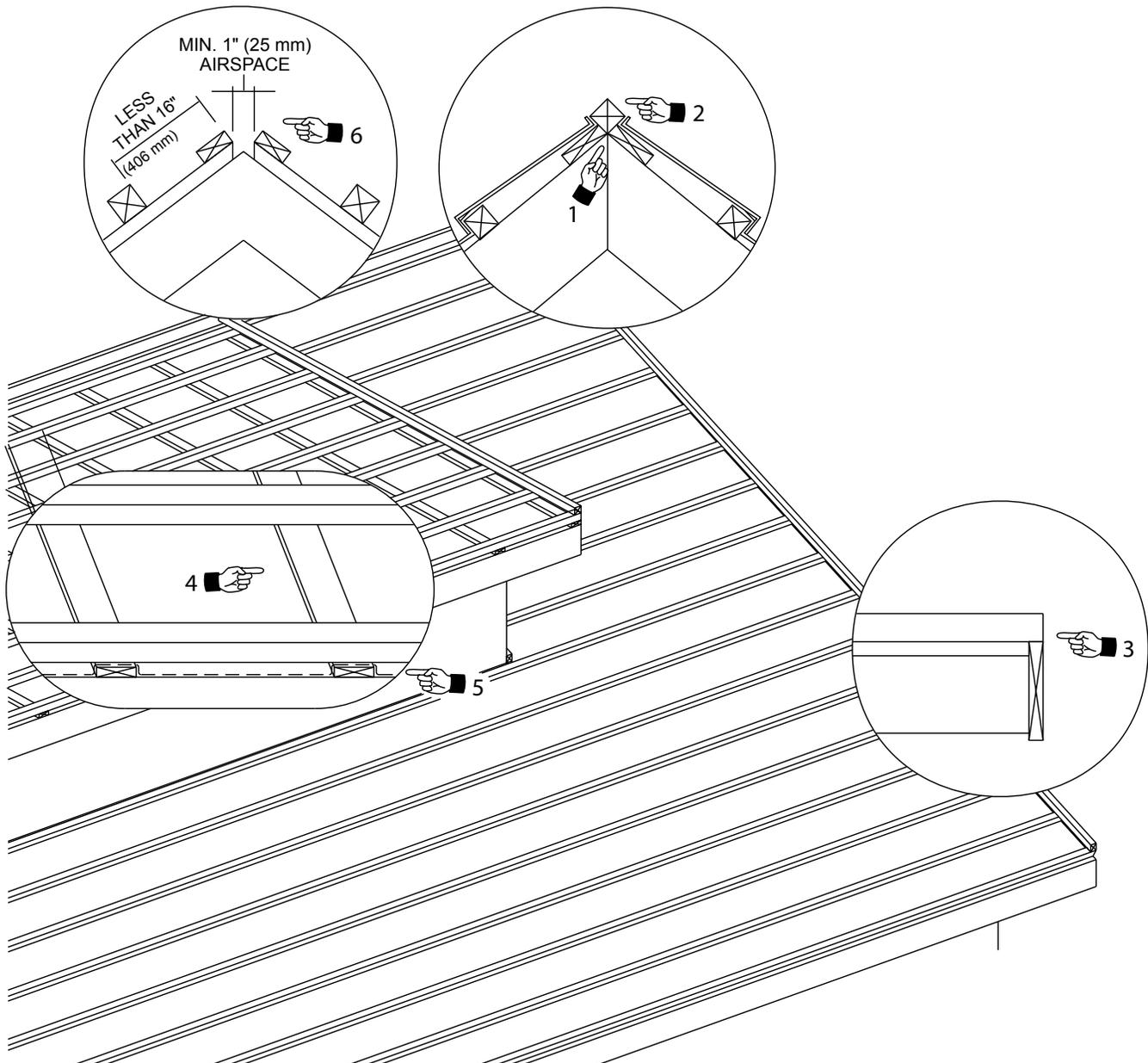
If venting is not required, then the panels are bent up against a 2" x 2" (50 mm x 50 mm) (note 1 & 2).

Rake Framing – (Square)

The main panel battens are terminated flush with the fascia (note 3).

Low Slope Framing

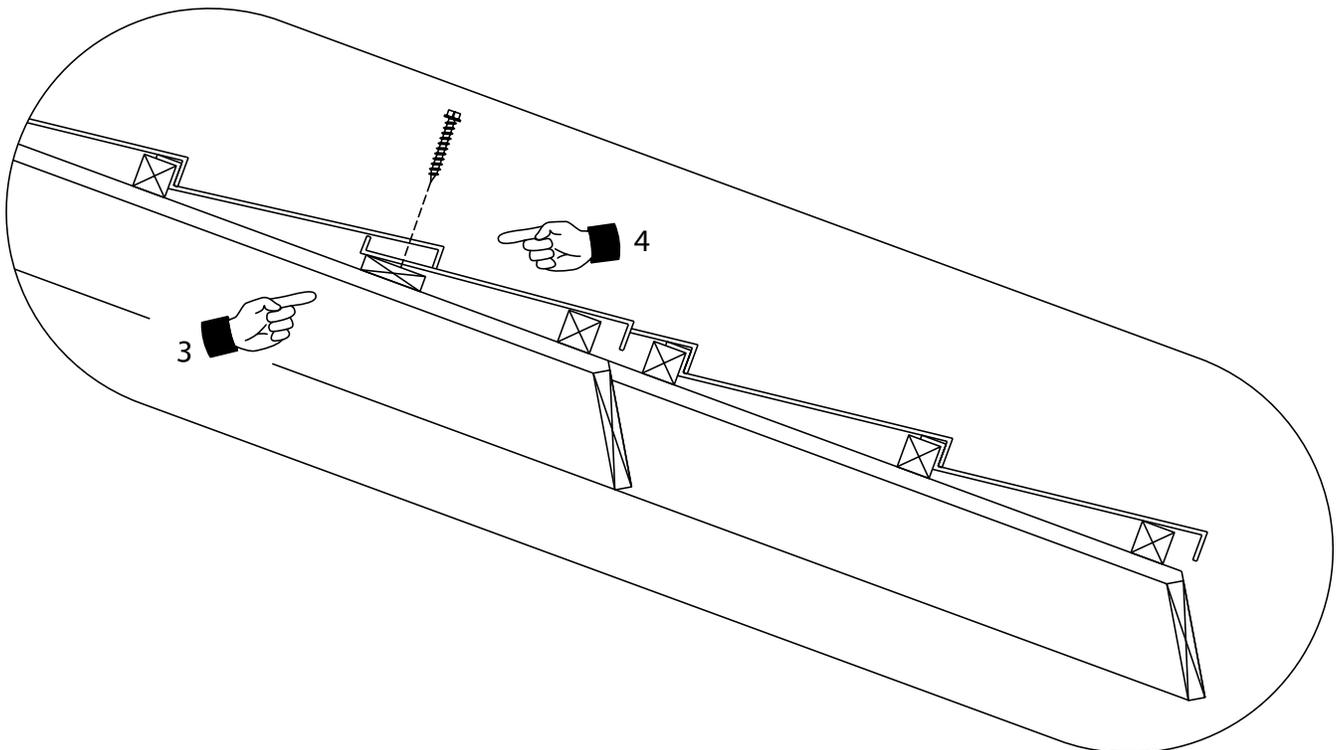
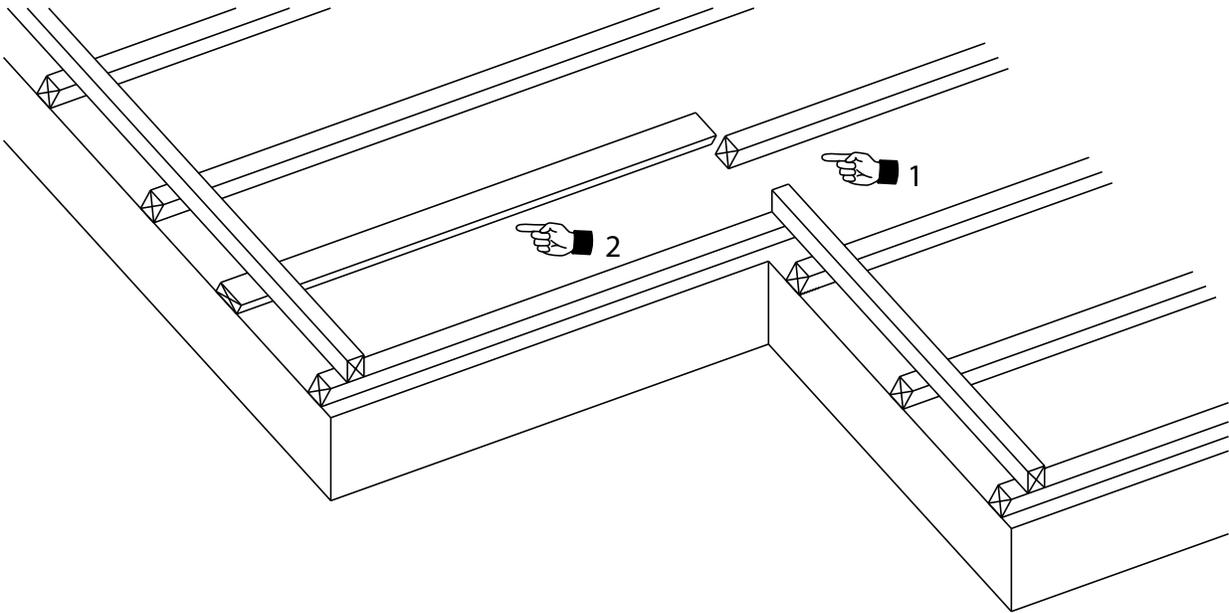
Minimum 1" x 3" (25 x 76mm) spacers are run vertical centered over existing rafters and fastened through (note 4). A moisture membrane (felt, Tri-Flex® 30 or ice and watershield) is placed horizontally with proper lap and allowing for the membrane to loop over the spacers (note 5). The main panel framing and details are then continued over. Care must be taken to protect the membrane from penetrations and tears. Repair cuts and areas at roof penetrations with a Tyvek tape.

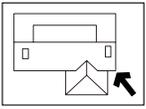


Backset Fascia

Where a fascia is backset from the starting course, it is necessary to terminate the first through course batten at the offset (note 1). It will now become necessary to shim up this course to plane (notes 2 and 3). A 1" X 4" (25 x 100 mm) will generally

serve this purpose best. The eave course of panels is now able to slide back up under the next course of panels which is fastened down through into the shim (note 4) then the fastener is caulked, covered with granules and sealed with acrylic.

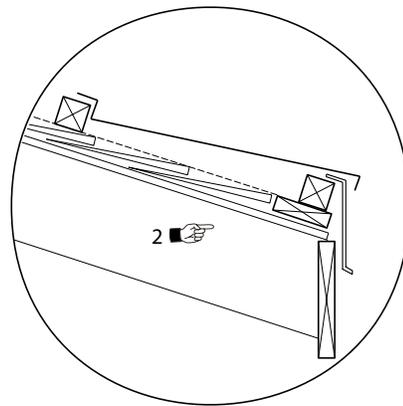
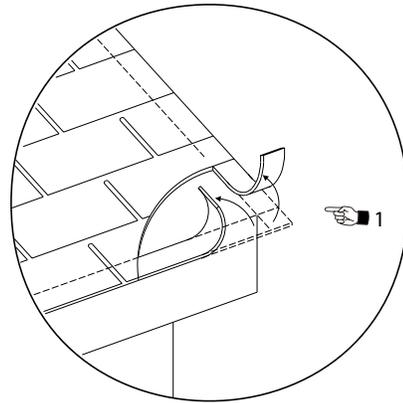




Eaves and Gable Preparations

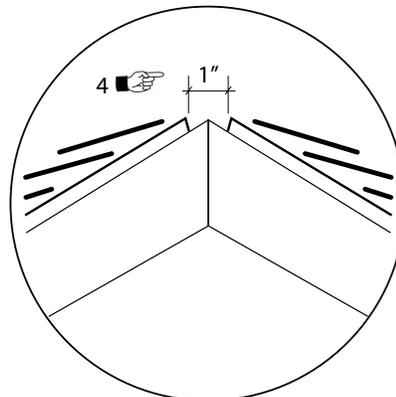
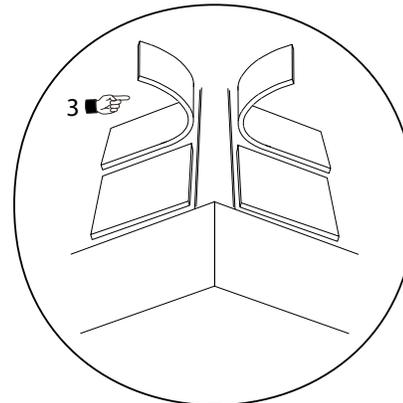
All existing protruding roofing should be removed to a point inside the vertical line of the fascia (note 1). In cases of multiple layers of shingles or shakes, it will become necessary to install a filler, shim, or thicker starter batten (note 2).

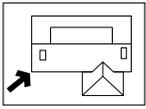
Note: If the starter course is not held in the same plane as the balance of the roof the profiles will look distorted. Please ensure proper shimming of the eave batten.



Hip and Ridge Preparations

Remove any existing hip and ridge caps that protrude above the plane of the roof (note 3). If the attic space is to be ventilated through the ridge, cut back the existing roof materials and decking to provide a minimum 1" wide slot along the required area (note 4).





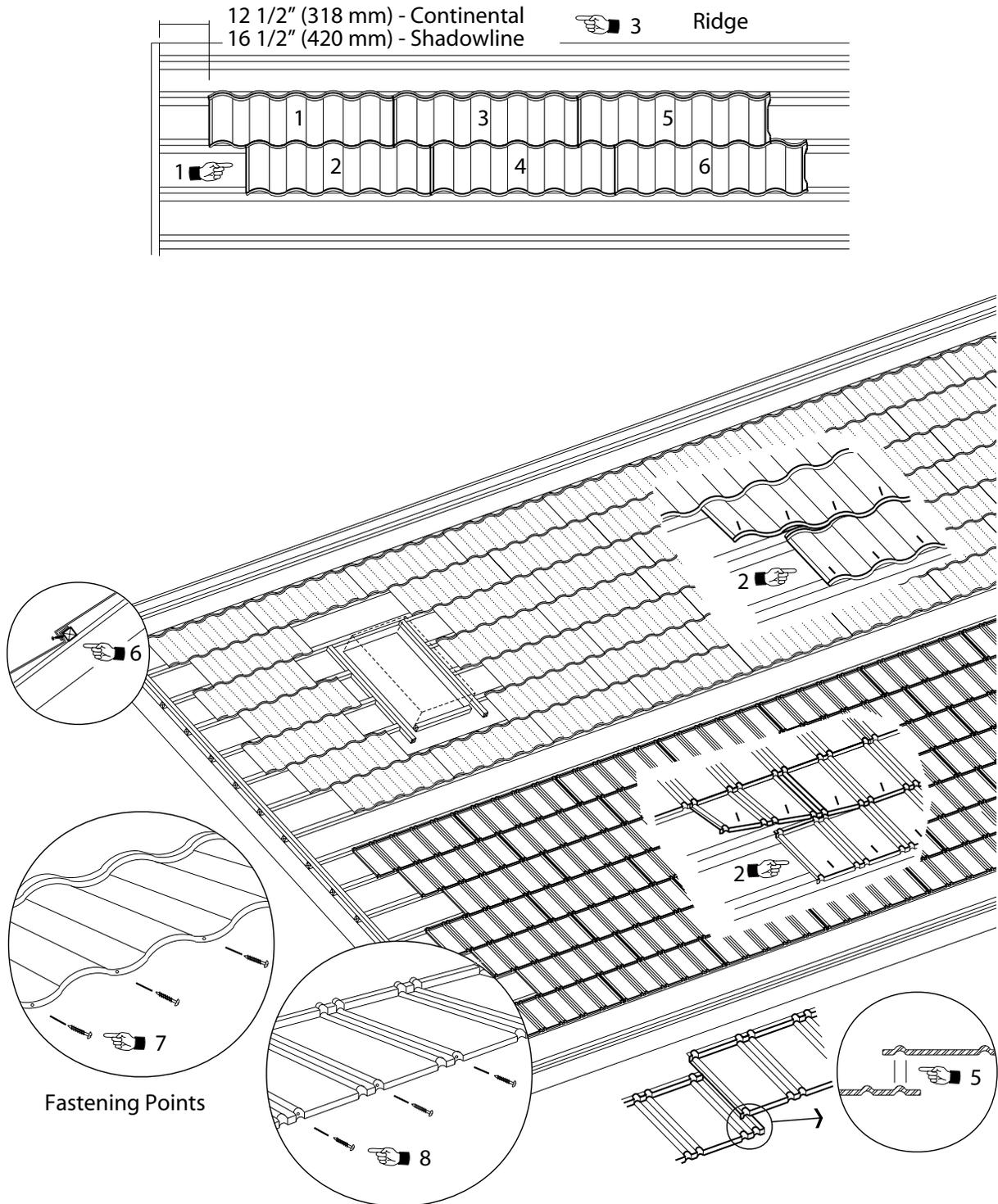
Installation Product Manual

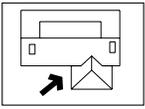
Full Panel Installation Continental and Shadowline

Panel Laying

Starting at the first full course from the ridge, lay two rows of panels simultaneously. The second course is used to accurately space the joints of the first course. This is crucial in maintaining tight fitting joints and pattern throughout the plane of the roof (note 1). Temporarily fasten the top course with galvanized nails trough the top of the back flange

into the top of the batten. Proceed to lay all full panels, staggering the joints in adjacent courses. Each course is laid by lifting up the preceding panel and tucking the back of the panel up under (note 2). This ensures accurate fitting of the panels. To better facilitate this, always leave two courses of panels loose then reach back and fasten the third course.





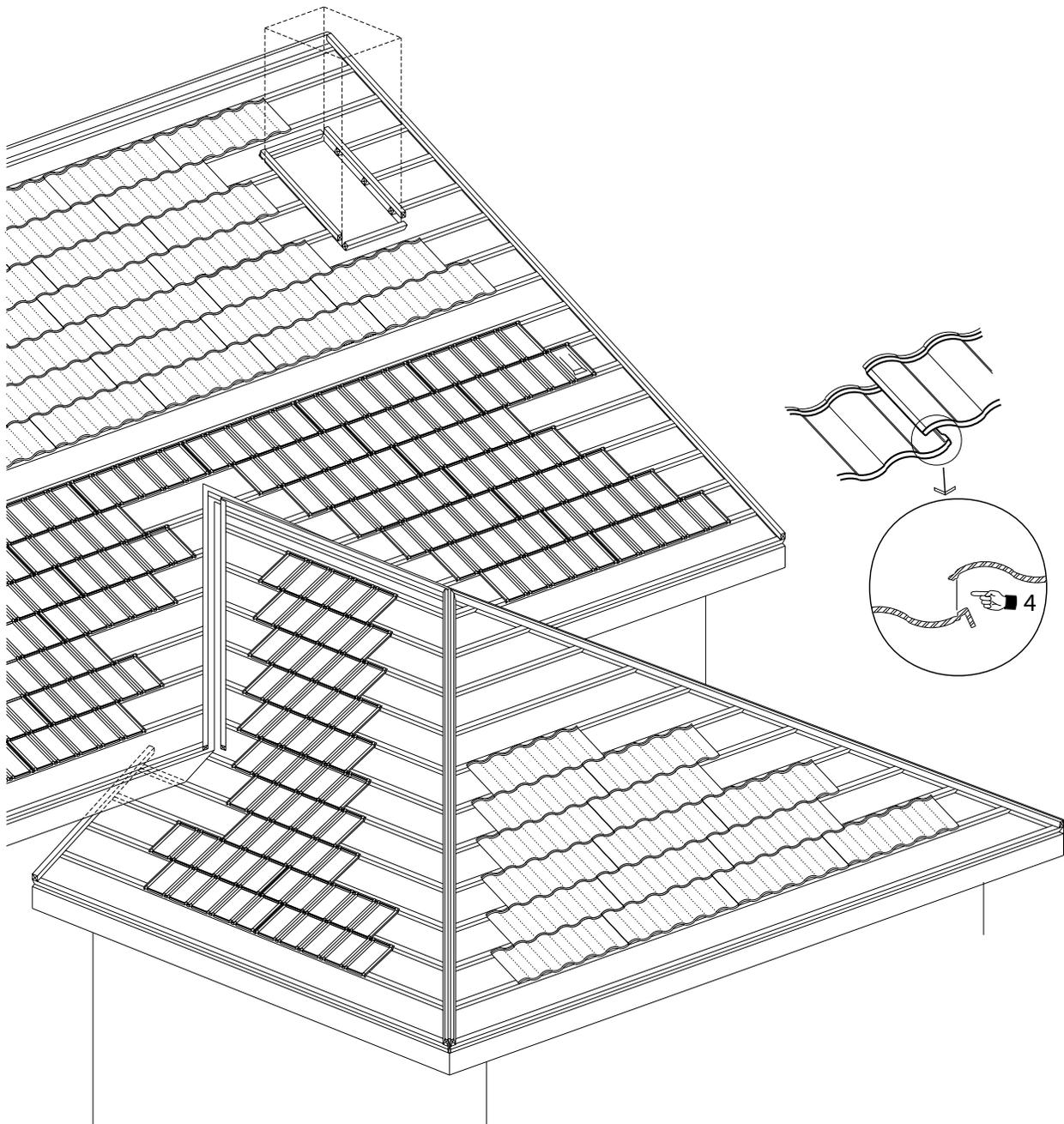
Installation Product Manual

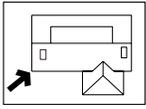
Full Panel Installation Continental and Shadowline

Start your first “Continental” panel 12 1/2” (318 mm) from left gable (note 3). This will place your bends in the valley of the profile. On a gable-to-gable roof adjust this so each gable is identical. This measurement is 16 1/2” (420 mm) for “Shadowline” panels which will place your bend centered on the flat exposure (note 3). Again adjust this on a gable to gable roof to balance the pattern. This will ensure that you are handling practical size pieces which eliminate waste. This measurement is to be a minimum of 4 1/2” (114 mm) for hips and valleys from the closest point. The Allmet panels only lap right over left (notes 4, 5) but panels may be

laid right to left by lifting and tucking under (this is slightly more time consuming). The panels are fastened up through the front lip (note 6) in the proper location (notes 7,8). **The size, type and quantity of fasteners are a requirement of the applicable building code.**

Note: The eave courses of panel are left until all other areas of the roof are complete to minimize the roof traffic on the installed product. Please install highest roofs first to minimize foot traffic on lower roofs.





Installation Product Manual

Full Panel Installation Woodshake

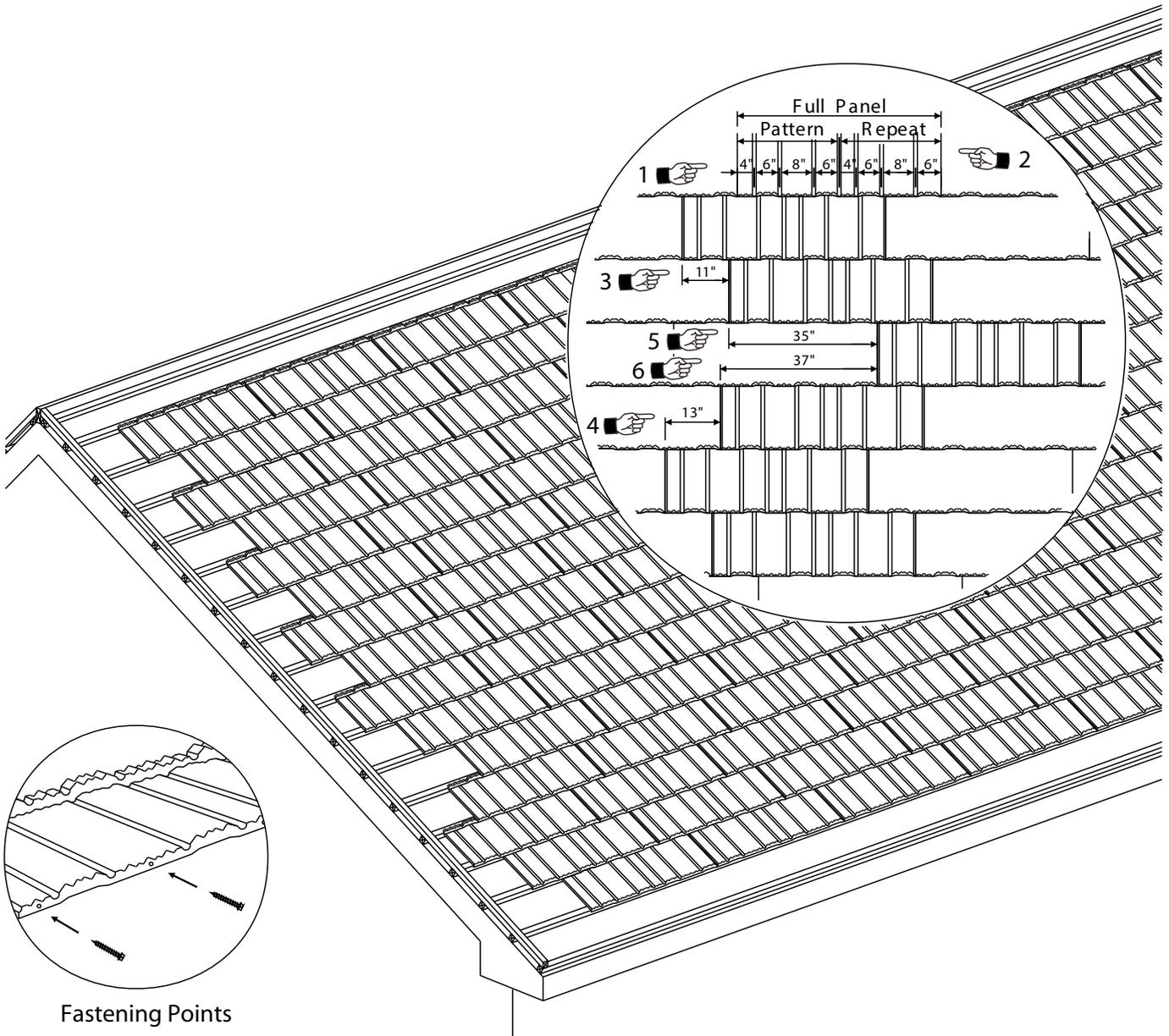
Panel Lying

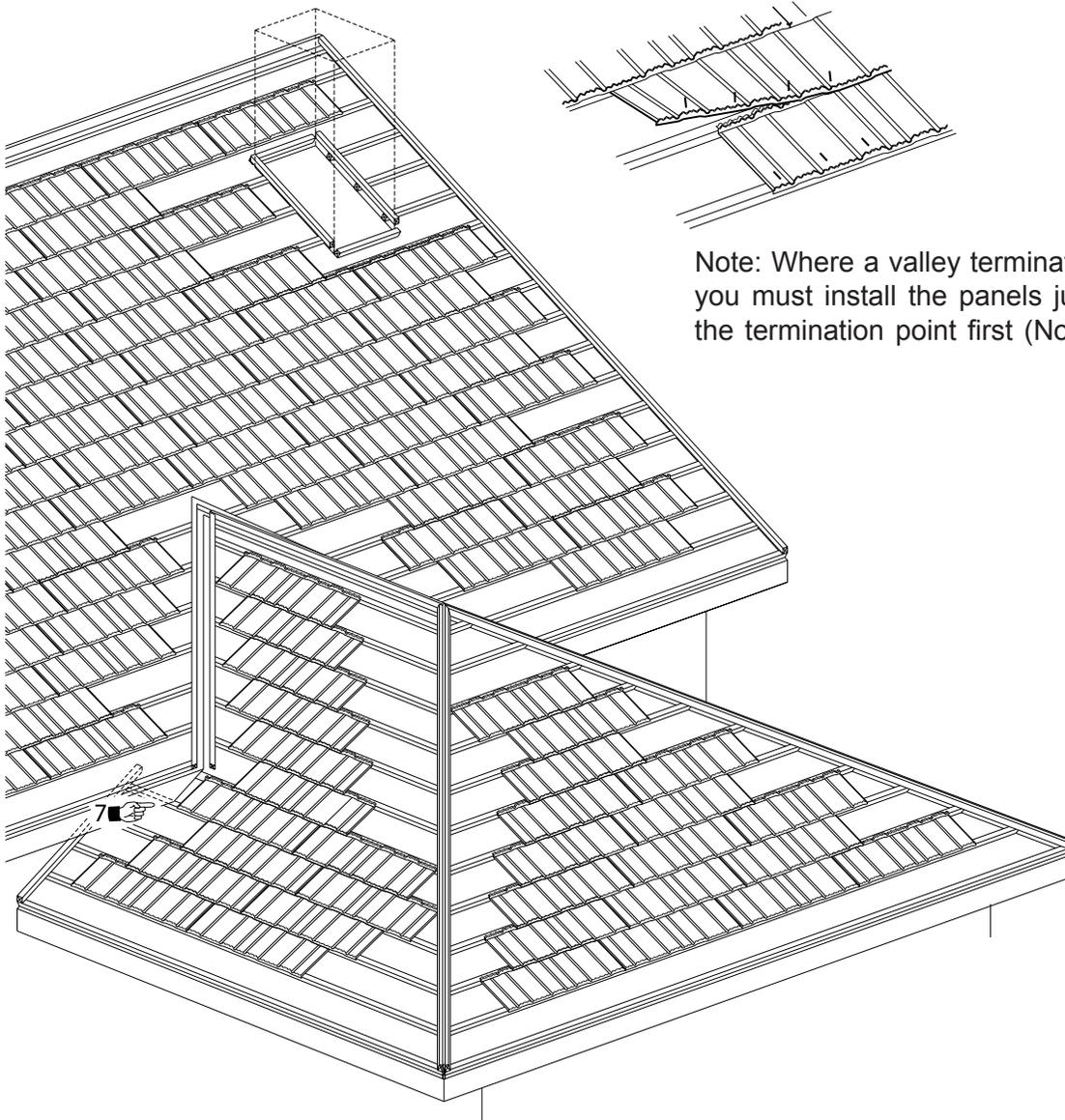
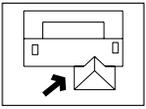
The pattern of the Allmet "Shake" panel is comprised of a 4" (100 mm) low, 6" (150 mm) high, 8" (200 mm) low and a 6" (150 mm) high (note 1). A full panel has two pattern repeats (note 2). This allows for two pick-up points per panel. The rear shelf of the "Shake" panel is profiled to match the pattern at the front of the panel and is offset by 13" (330 mm) to the left.

When installing the tiles from the top down, the pattern will alternately shift 11" (279 mm) to the right

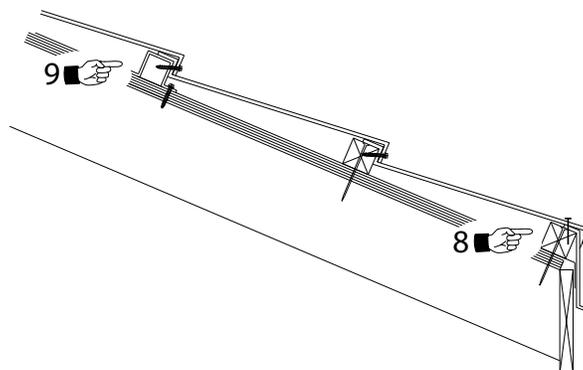
(note 3) and/or 13" (330 mm) to the left (note 4) for a net offset of 2" (50 mm) every second course. The pattern will only repeat every 13 courses. As each panel contains two patterns, it additionally allows for a 35" (889 mm) offset to the right (note 5) and/or a 37" (940 mm) offset to the left (note 6).

As the pattern slowly advances to the left it is at your convenience where you start your first panel although for a hip/valley installation you should try to adjust this so as to eliminate cuts and bends diagonally across the ends of a panel.



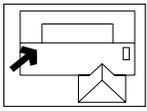


Note: Where a valley terminates onto a lower roof you must install the panels just under and below the termination point first (Note 7).



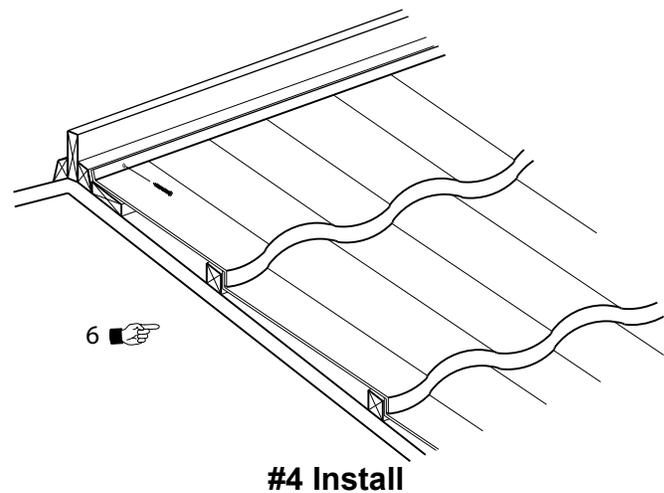
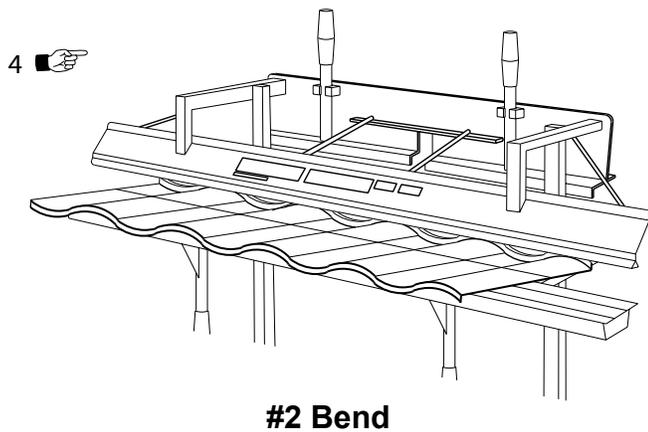
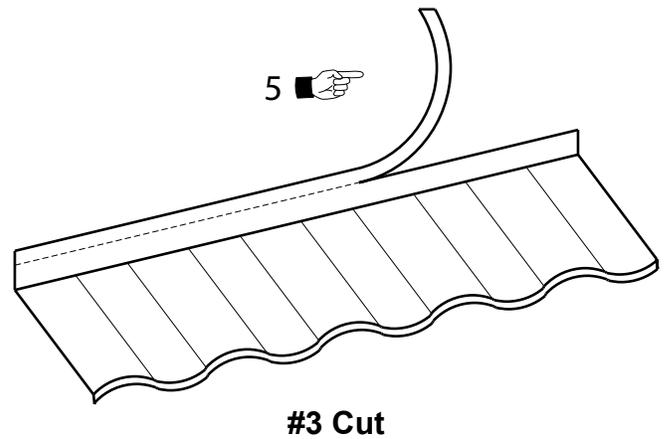
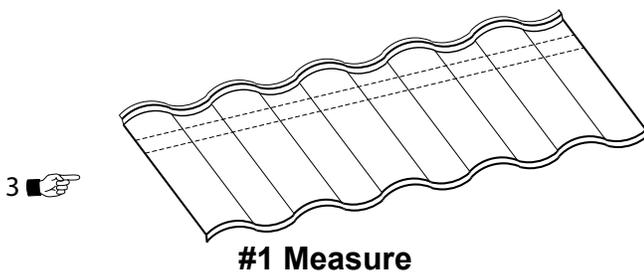
Note:

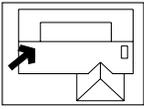
1. The eave course of panels is fastened down through the top of the tile into the eaves batten (note 8). Seal the head with a small amount of Allmet caulking, then coat with granules and seal with clear acrylic.
2. When metal hat channels are used for battening they are fastened to the deck or framing members through the lower flanges with the panels fastened in the normal manner (note 9).



Full Panel Bends

If the top course is less than a full panel (notes 1, 2) and the panels termination requires a full tile bend up, remember to measure first (note 3), bend second (note 4), and then cut (note 5). If a full panel is cut across the width first it will accordion making bending impossible. An Allmet Shake Break must be used for this operation. Some distortion will appear but will work itself out as you fasten the panel in place (note 6).



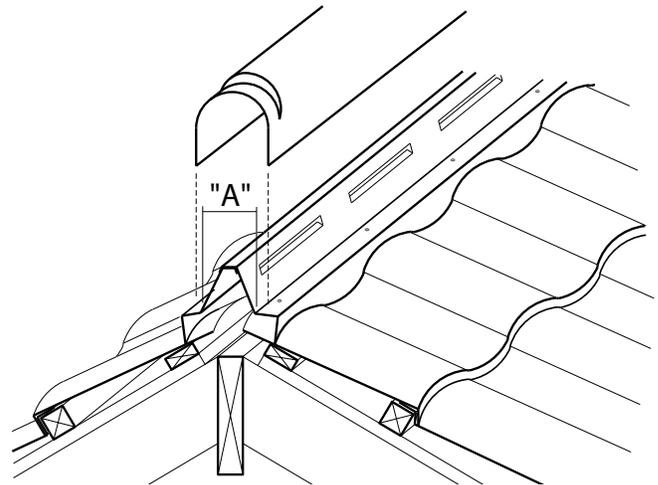


Installation Product Manual

Top Course Installation Continental – Vented and Unvented

Vented Top Row

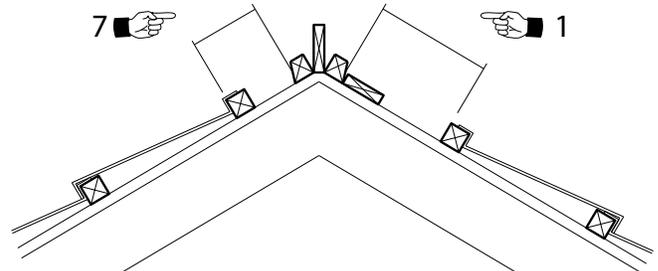
Cut a slot in the deck 1" (25mm) wide at the ridge. If the roof is constructed with a ridge board you will have to cut the slot wider. A 1" (25 mm) strapping is installed just below the slot to support the last course of tile. The last course of panels is cut off so as to allow 1" (25 mm) of free air between sides. After fastening the front of the panel in normal fashion, fasten the top of the panel through the panel into the 1" (25 mm) board at the top. Position the 2 pieces of vented top row so that measurement "A" is approximately 4 1/2" (114 mm) and chalk line for positioning. Secure the vented top row to the panel with screws at the high portions of tile. Stitch screw the 2 pieces of vented top row together with 1 screw per length per side. The barrel cap trims can now be fastened to the vented top row in the normal fashion.



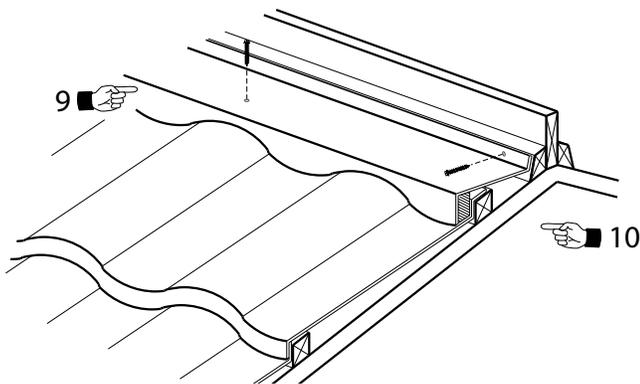
Vented

Unvented Short Course

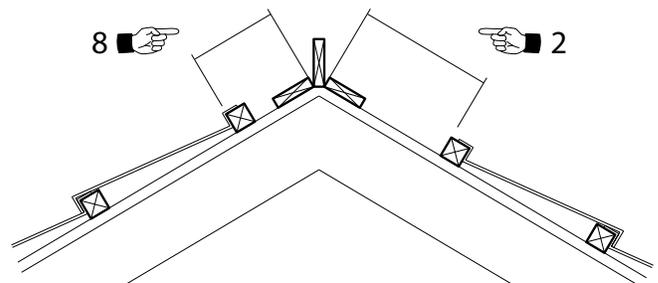
If the measurement shown in (note 7 - round) or (note 8 - square) is less than 3" (75 mm), the vented top row accessory may be used (note 9). Remove the top portion by cutting just below the vent louvers and install by butting against the ridge backer then telescope down over the adjacent course of tile.



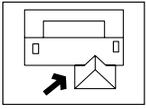
Round



Unvented



Square

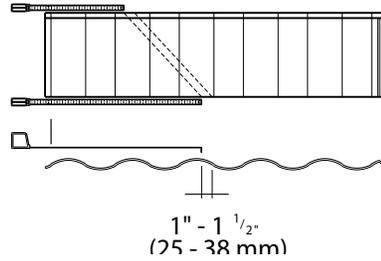


Installation Product Manual

Half Panel Installation Cutting and Bending

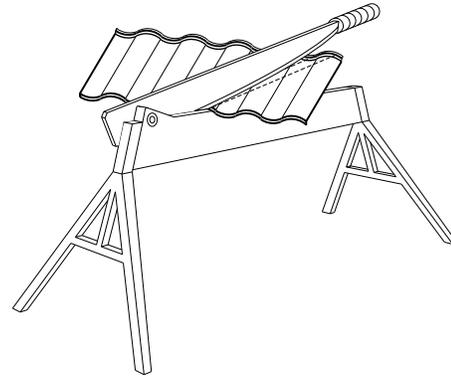
Remember

Measure and mark the bend first. Then add 1" to 1 1/2" (25 to 38 mm) and mark the cut.



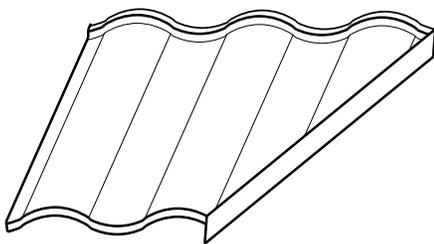
Cutting

Place the panel face up on the shear with the desired piece on the body of the shear. When you are cutting over hills and valleys diagonally, the shear will tend to wander and the panel must be adjusted during the cutting.

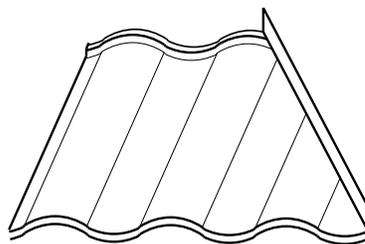


Bending

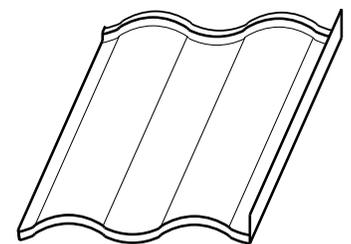
Place the cut piece in the Shake Break with the bend line at edge of brake on the half tile side. Depress foot pedal and hold then lift or lower the panel manually to give the required upturn or downturn. As you are bending across the profiles, the panel will accordion slightly when broke. Compensation must be made when transferring the measurement to the panel.



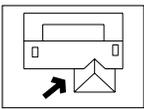
Valley



Hip



Gable

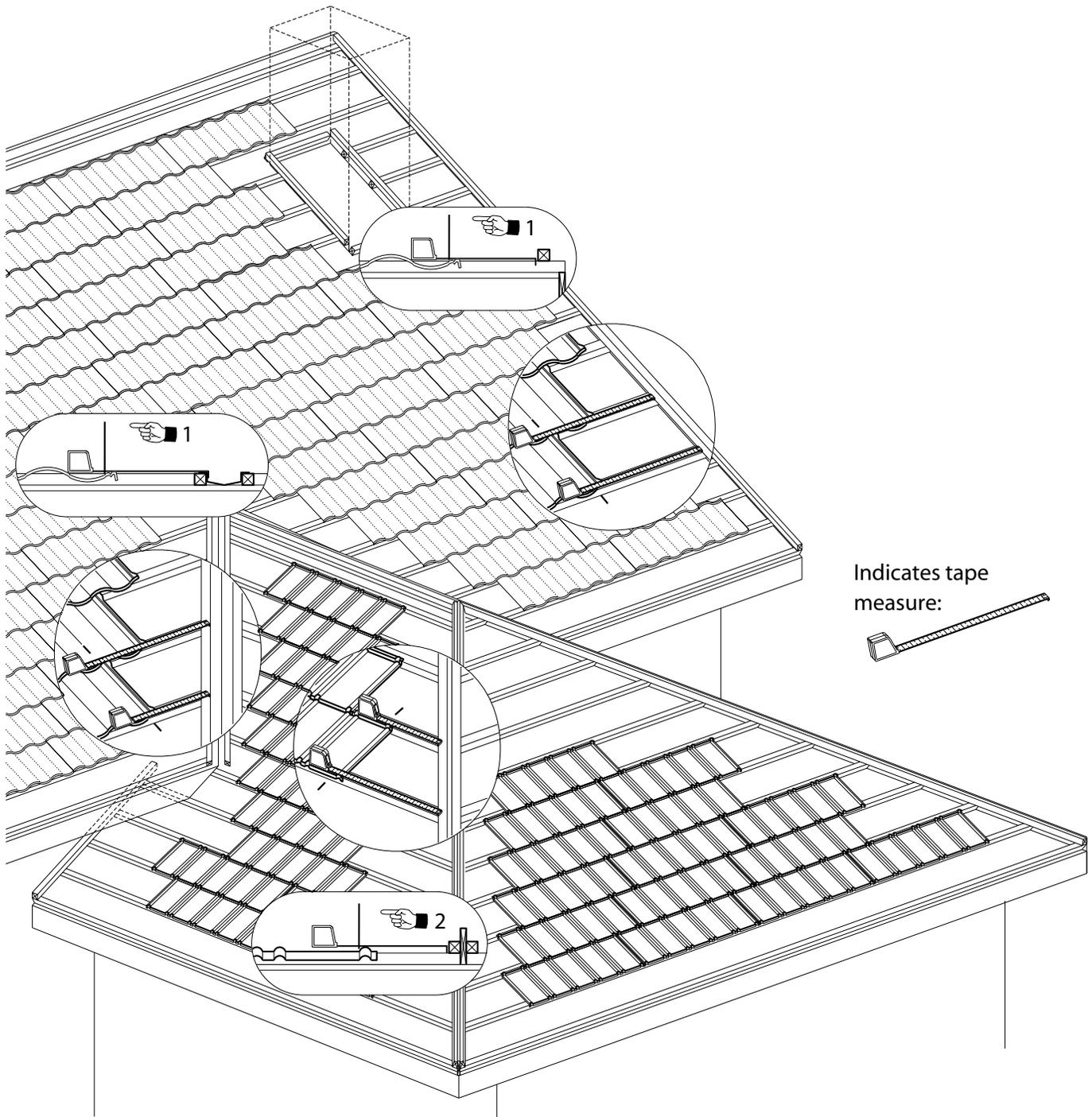


General

Measurements are taken top and bottom for each piece. Each installer has his own preferred spot on the panel to use as a common base point to measure from. This generally is at the top or bottom transformation point on the Continental panel where concave meets convex (note 1) or a profile bar on the flat panels (note 2). Add 1/8" (3 mm) to the bottom measurement of gable cuts to allow for lap piling. Remember the measurements taken are the bend points. An additional 1" - 1 1/2" (25 - 38

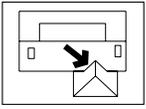
mm) must be then added to find the cut line. Multiple measurements can be taken, then panels cut and bent in order. This will eliminate unnecessary travel up and down the roof.

Note: As the rear of our panels are stronger than the front, a slight distortion of the front edge will occur on diagonal bends. Depending on the angle, you may have to compensate for this distortion on the bottom measurement.



Standard Details

Section Four



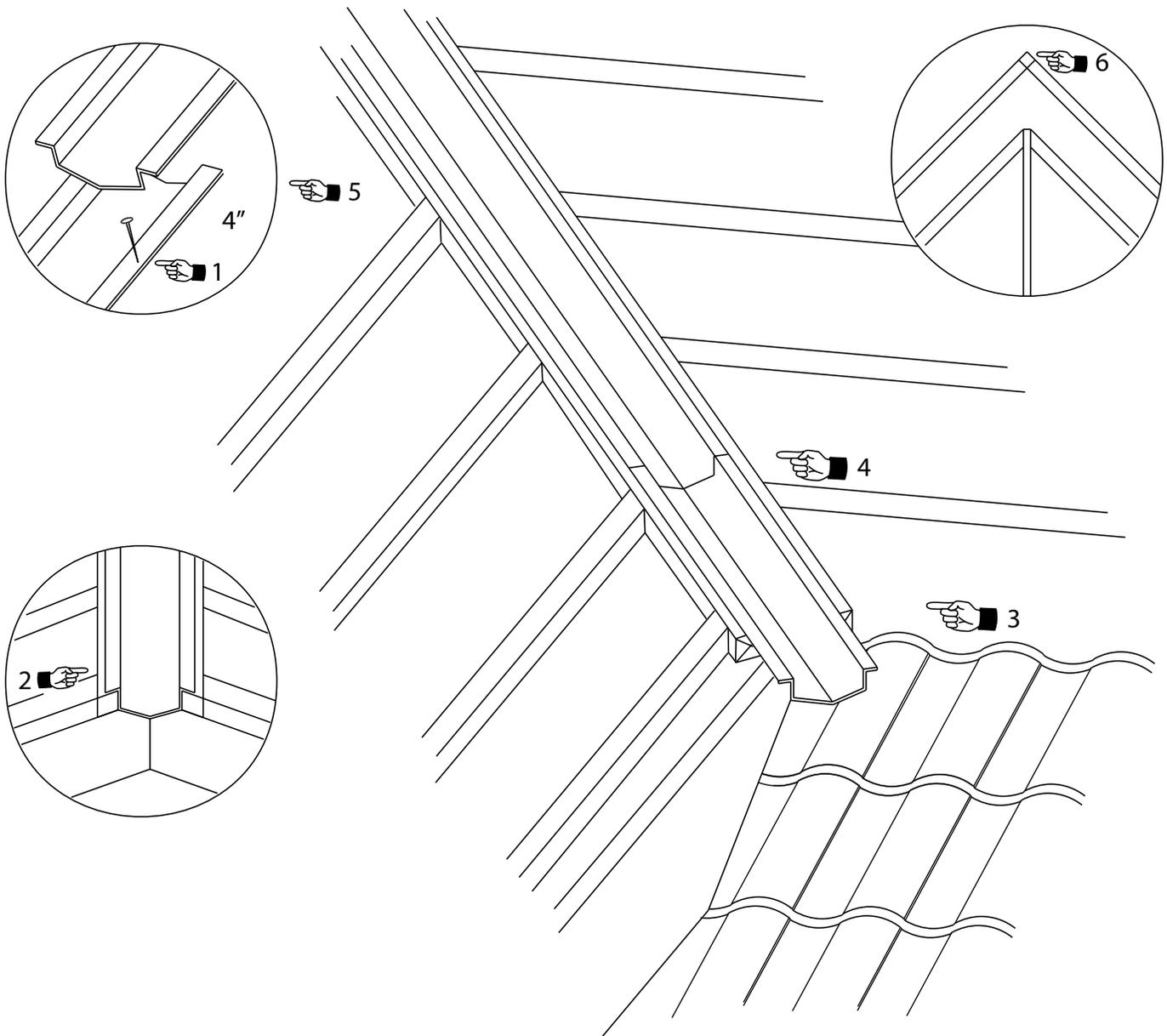
Installation Product Manual

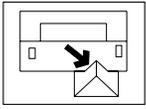
Valleys Valley Flashing Installation

The Allmet Valley Flashing is laid in between the two valley battens and fastened with galvanized nails down through the top flange (note 1). Where the valley terminates at the fascia, the valley flashing should extend past the fascia a minimum of $\frac{3}{4}$ " (19mm), then scribed to the fascia (note 2). Where the valley terminates on to a lower roof, the lower roof panel should be laid through (note 3) with the valley flashing transitioning out on top of the lower panel, preferably in a lower part of the panel. It is generally wise to start with a shorter piece of valley

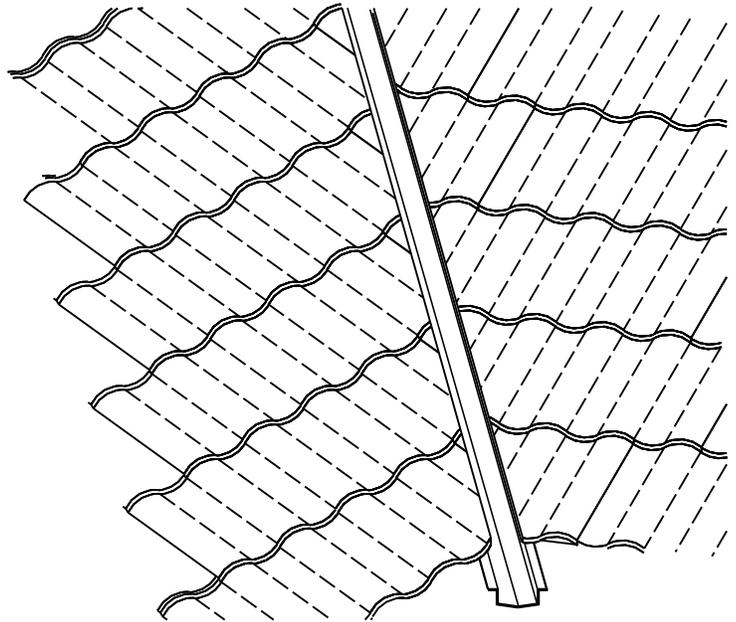
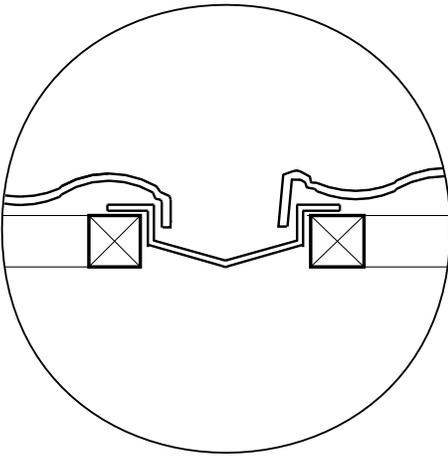
to allow for this transition (note 4). The valley flashing should be lapped a minimum of 4" (100mm) and set in a bead of mastic (note 5). Junctions in valleys should be formed by standard sheet metal practices of notching and folding each piece in opposite directions, again setting in a bead of sealant (note 6).

Note: Conditions of lower slopes and ice damming will require large laps than 4" (100 mm) (note 5) and an ice and water shield should be considered.

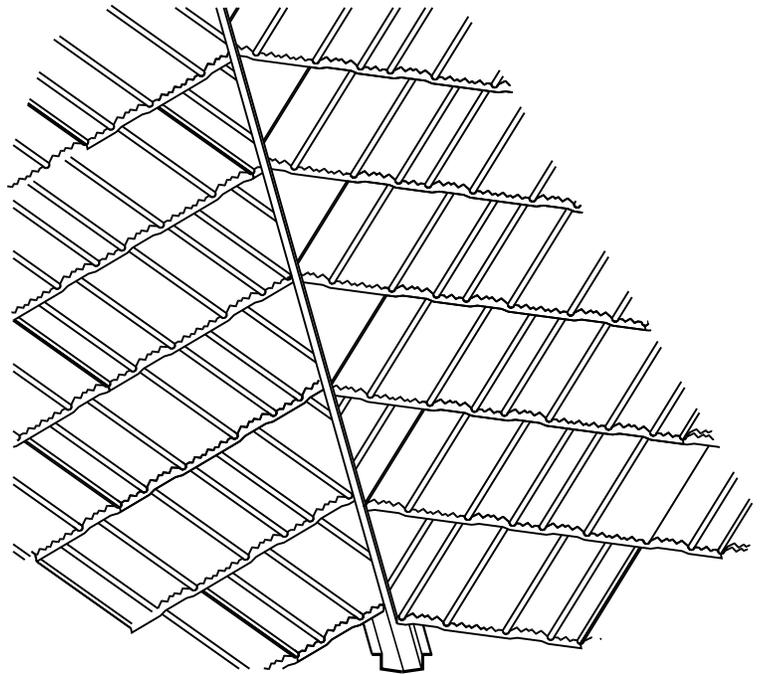
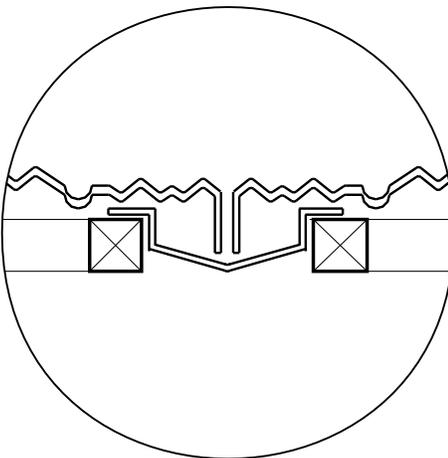




Open

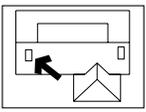


Closed



Note:

1. This alternate application is utilized in areas of high debris such as trees over hanging the roof.
2. This application is not generally recommended for snow and ice climates without additional consideration in the installation. Please contact the technical department for more information.

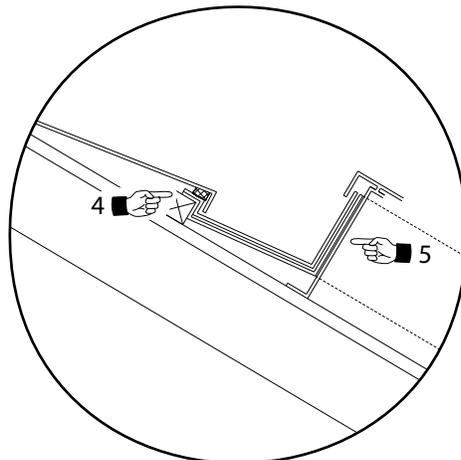
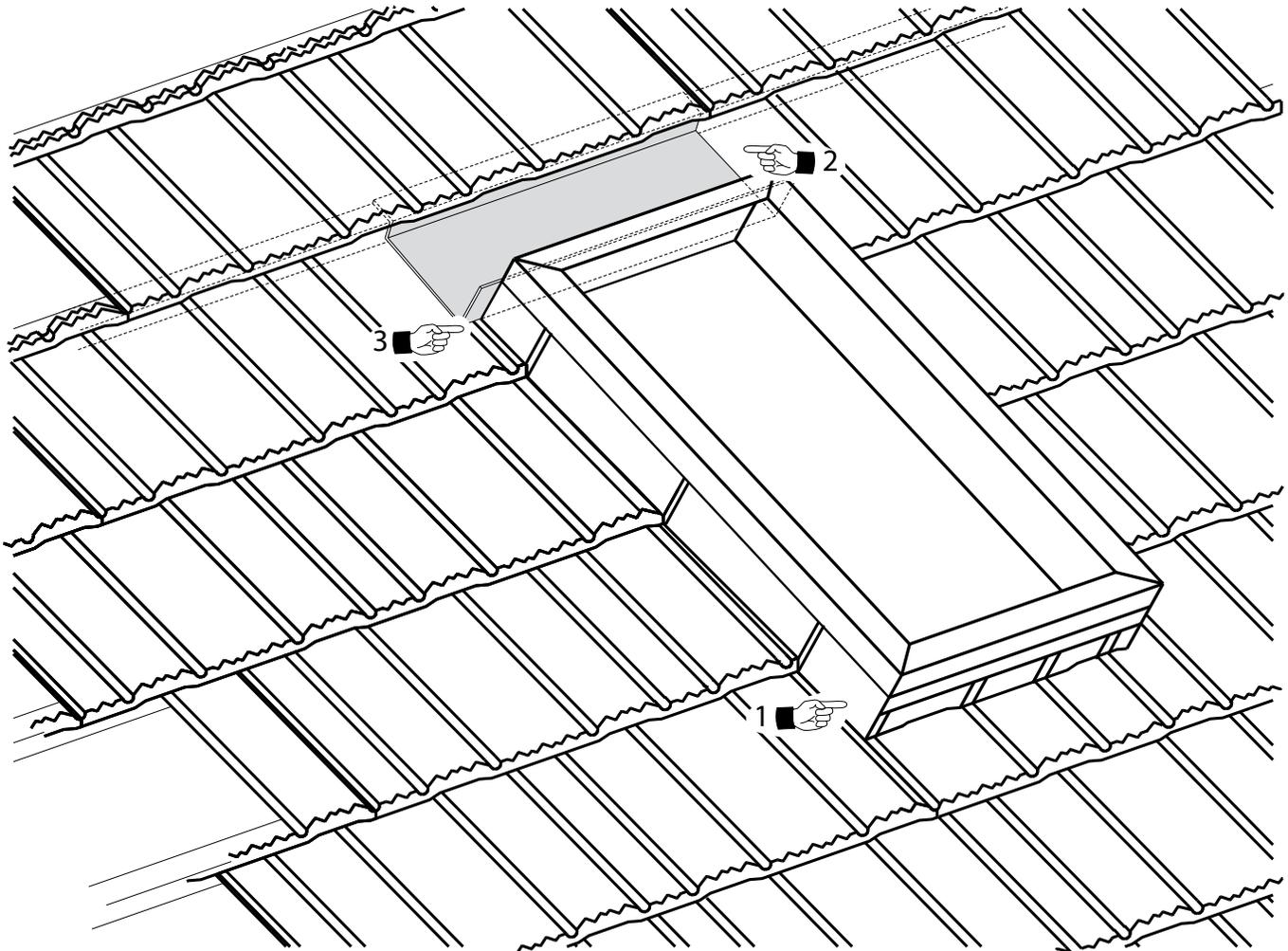


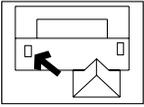
Installation Product Manual

Skylight Flashing Standard Curb Detail

The panels are bent up against the sides and bottom of the skylight to a sidewall and head wall condition (note 1). They are flashed over with either the skylight flashing or a counter flashing made to fit from all-purpose flashing. The partial panel directly above the skylight is left out and a pan flashing is formed from an all-purpose flashing with a back shelf similar to a panel and returning up the

full height of the skylight (note 2, 5). Carry the pan flashing past each side of the skylight a minimum of 4" and bed the joint with the panels in Allmet caulking (note 3). Cut and fold the protruding corners of the pan flashing around the sides using standard sheet metal practices and seal. Use an Allmet closure strip to seal the top shelf where the panels overlap the top of the pan flashing (note 4).





Installation Product Manual

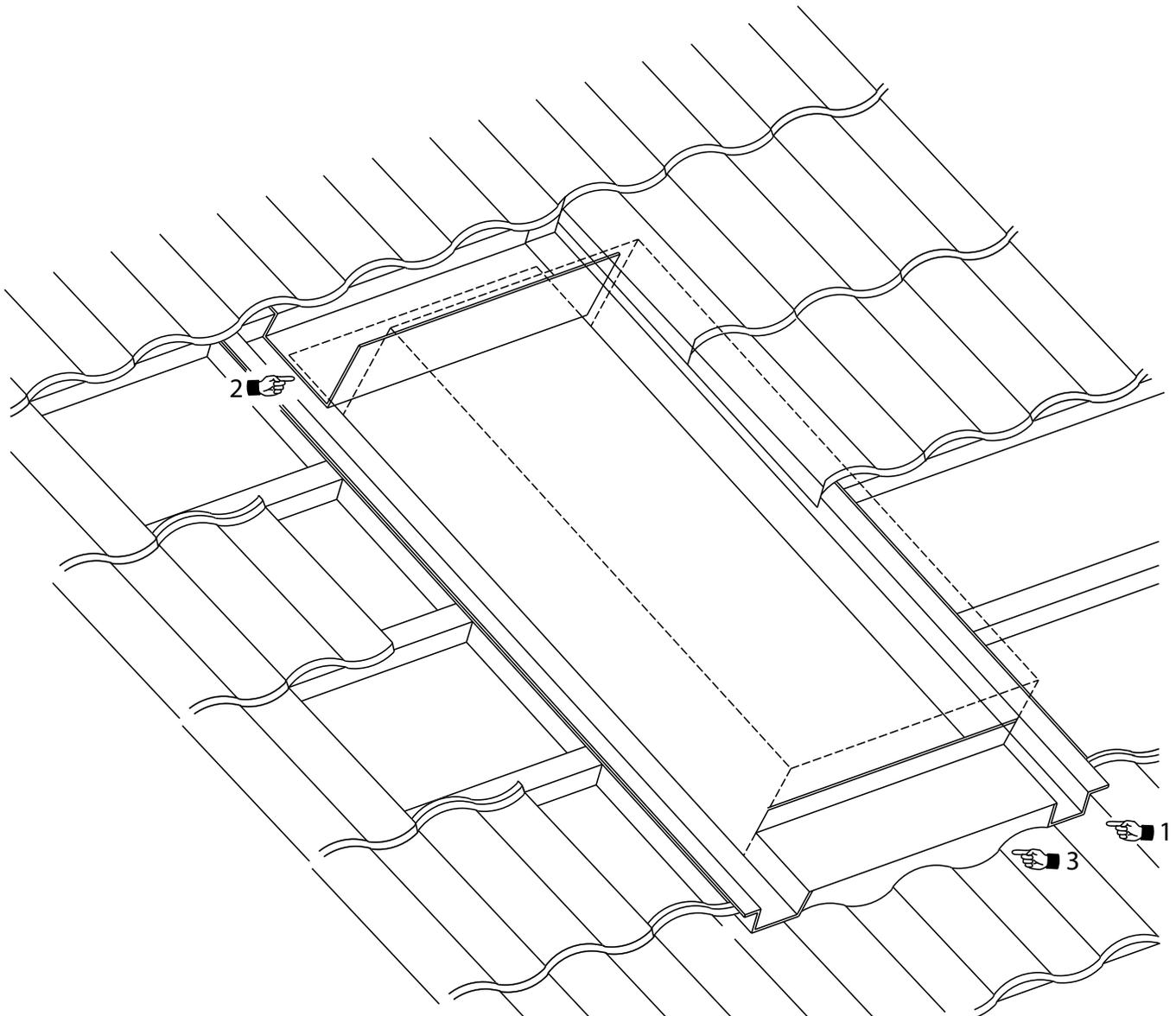
Skylight Flashing Low Curb Detail

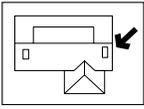
A valley flashing is reformed such that one leg is vertical and is placed up each side of the skylight with the top being cut and folded and the bottom transitioned out 6" (150 mm) past the end of the skylight onto the last full panel course below the skylight (note 1). An all purpose flashing is bent up and placed along the top of the skylight. The ends are folded as per proper sheet metal techniques (note 2). After fastening, caulk the joints with Allmet clear caulking, then embed stone and seal with

spray acrylic. The bottom of the skylight is then closed off with vented top row for Continental (note 3) or with all purpose flashing for Shadowline and Shake. Field panels are then cut and bent down into the flashing.

NOTE:

If possible when laying out field panels allow for the skylight flashing to exit at the lower profile of the tile (note 1).

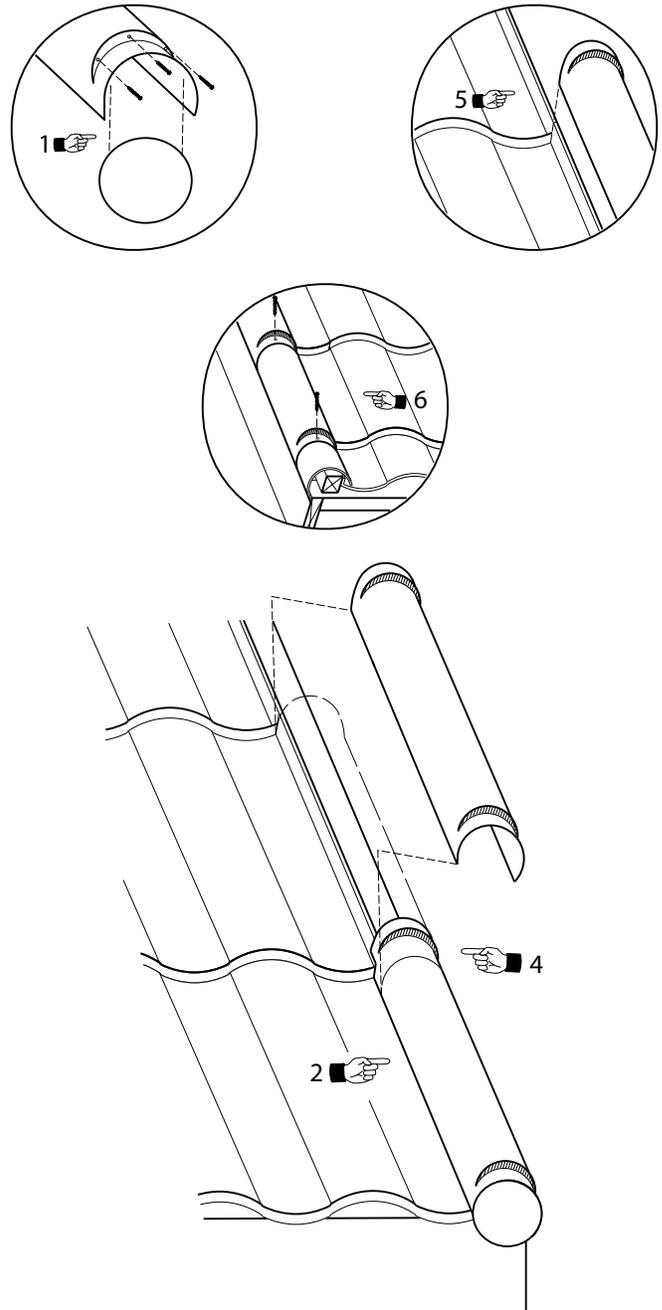




The barrel cap trim is installed from the bottom up, course for course with the panels. Install the end disk with three screws as shown (note 1). Position the first cap on the rake with the rear portion against the panel flange (note 2). Noting the open distance between the end disk and fascia, notch the cap (note 3) so the barrel trim will fit with the fascia. Install the balance of the caps with the back edge tight to the panel upstand (note 5). This will give a larger gap between the first and second course of caps (note 4). Position caps by rolling so as the exposed edges along with the fascia form a straight line while remaining tight to the panel. Fastening is by a single fastener down through the front flange into the 2" x 2" backer (note 6).

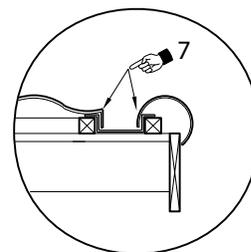
Note: When installing the end disk a more pleasing finished product is achieved by snipping the lower flange and flattening flush with the disk, then caulking and shipping the joint.

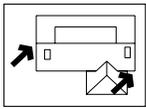
Note: Please ensure that the caps are installed with correct lap. The small flange overlaps the large flange and faces down the roof. Also ensure that the panel upturns are to the top of the 2" x 2" blocking.



Splayed Gables

If you do not want water running over the fascia then we recommend installing an Allmet valley flashing down the rake with both the panels and trim bent down into it (note 7). The gutter can be partially concealed by the trim and produces the most aesthetically pleasing and functional detail.





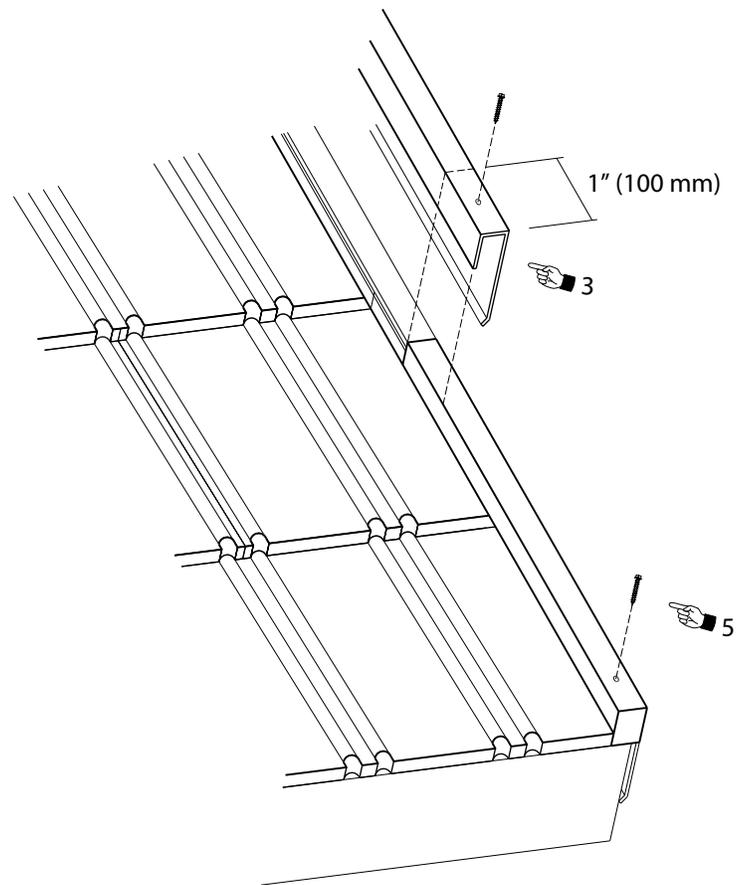
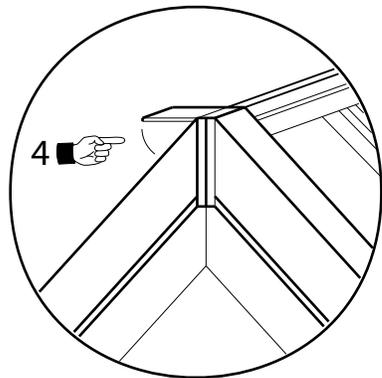
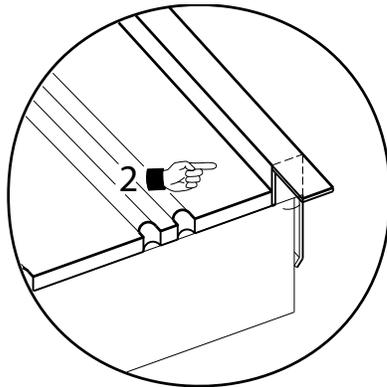
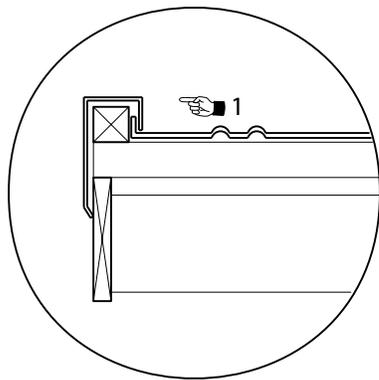
Installation Product Manual

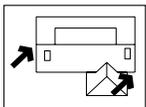
Gable Flashing Box Barge Installation

The trim fits down over the rake 2" x 2" and up-turned panel (note 1). Installed from the bottom up, it's important to start and end each rake of a gable end with the same length of pieces for visual purposes. The exposed lower end of this trim is cut, notched and bent down to close in the end (note 2). The following pieces should be lapped a minimum of 4" (100 mm) (note 3). The barge trim is lapped

and mitered at the peak as shown (note 4). The trim is fastened down through the top (note 5). A small amount of clear caulking and stone chip should be used to cover the exposed fastener heads if nails are used.

Note: Please ensure that the panel upturns are to the top of the 2" x 2" blocking.



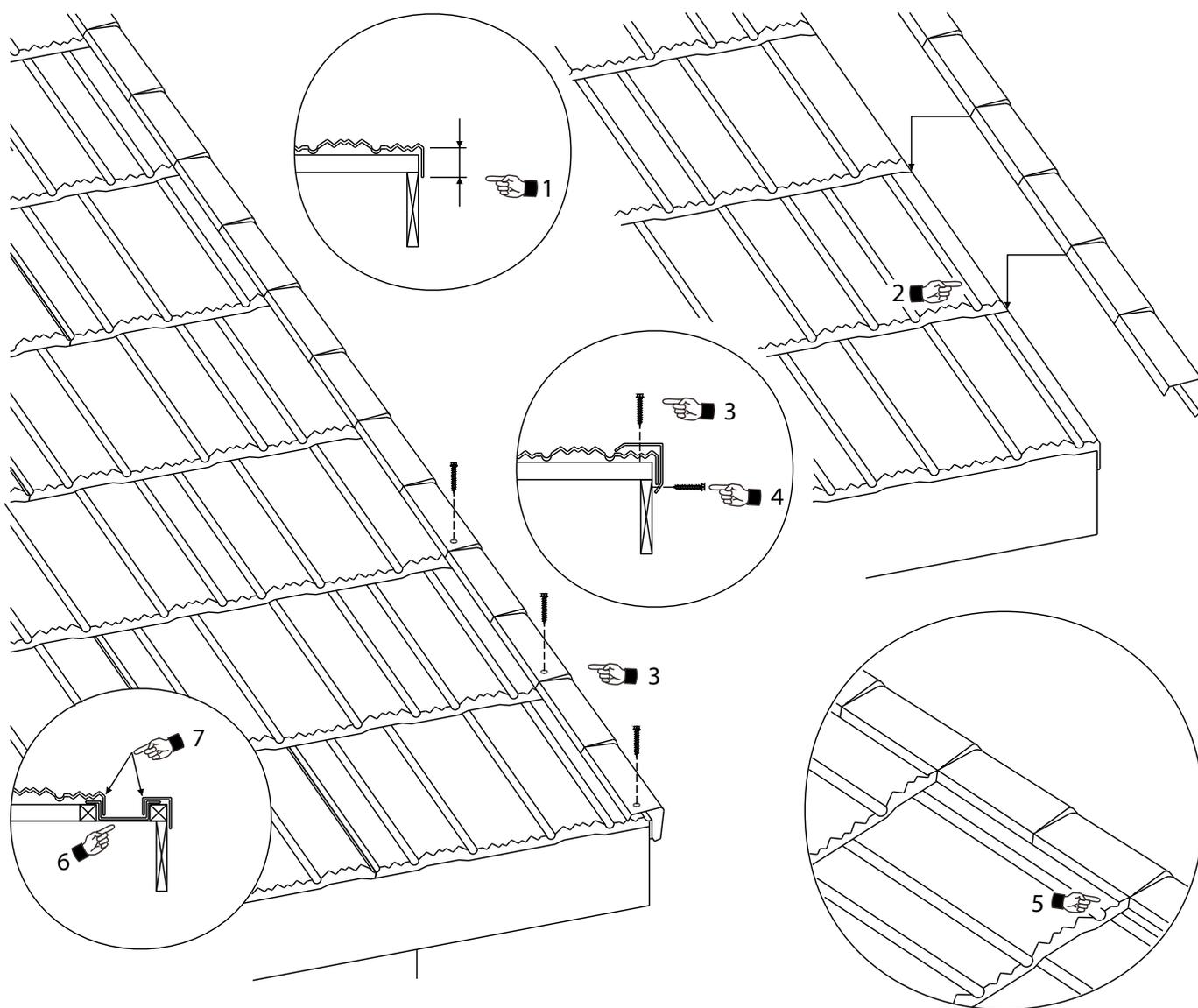


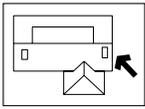
The shake panels are terminated by bending over the gable fascia a minimum of 2" (50 mm) (note 1). Place a square trim over the gable aligning the front of the shake tile with a profile in the trim (note 2). Hold the square trim plumb with the fascia and level with the plane of the roof and fasten down through the top leg into the 2 x 2 battens (note 3). In high wind areas we recommend an additional fastener be placed through the side into the fascia (note 4). Snip the top leg of the trim 3/4" (19 mm) flush with each front downturn of the panels

and bend the leg of the trim down tight to the tile to close the gap (note 5).

Splayed Gables

If you do not want water running over the fascia then we recommend installing an Allmet valley flashing down the rake (note 6) with both the panels and trim bent down into it (note 7). The gutter can be partially concealed by the trim and produces the most aesthetically pleasing and functional detail.



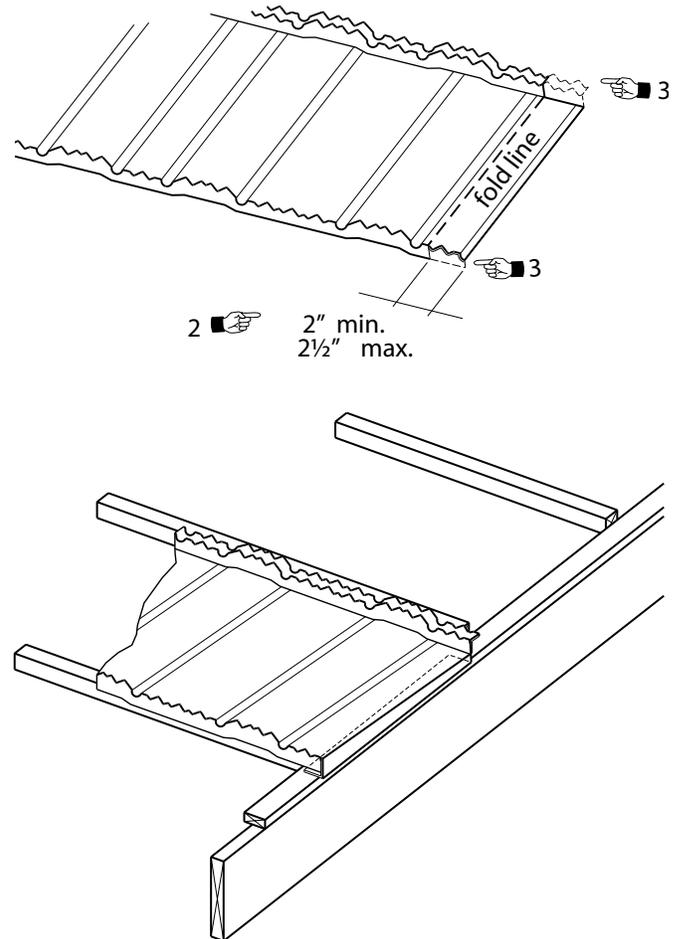
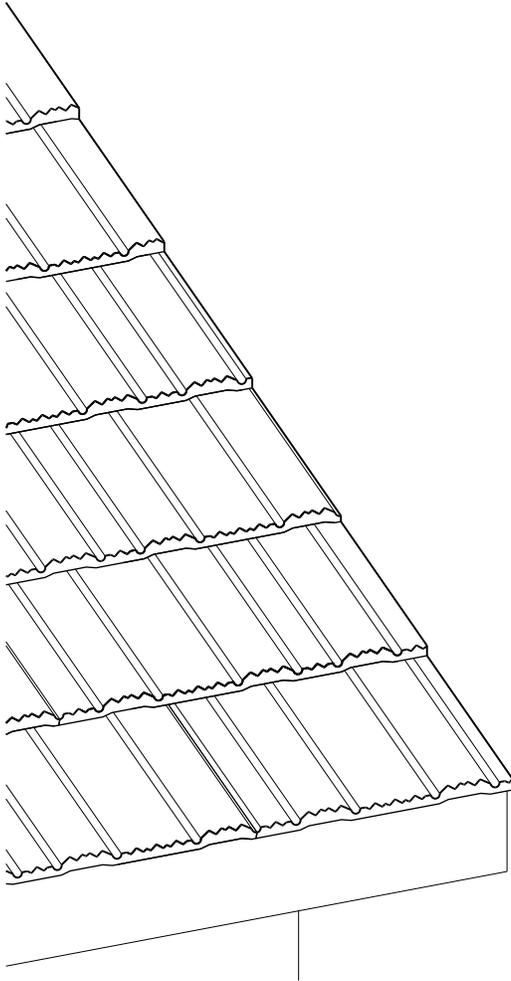


Installation Product Manual

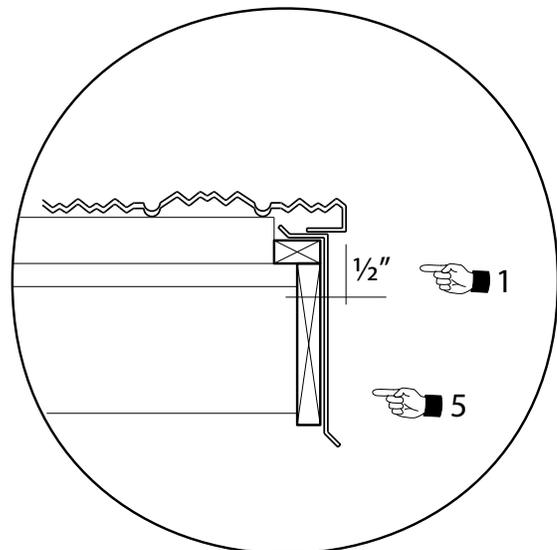
Gable Flashing Folded End Detail

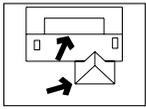
Measure for the cut panel allowing for a $\frac{1}{2}$ " (12 mm) overhang (note 1) and a 2" to 2 $\frac{1}{2}$ " (50 to 63 mm) fold (note 2). Notch the panel at the overhang marks removing the front and back upstands (note 3). Place the panel in the "SHAKE BREAK"

and make the tapered fold. Install and fasten the panels in the normal fashion. After fixing "Tap" the corners and edges of the tapered fold slightly to adjust and close the gaps (note 4).



Note:
The top ledge of the FGW trim, (note 5) is an integral part of the design of this detail





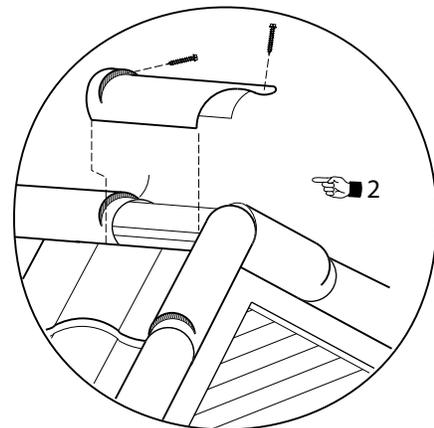
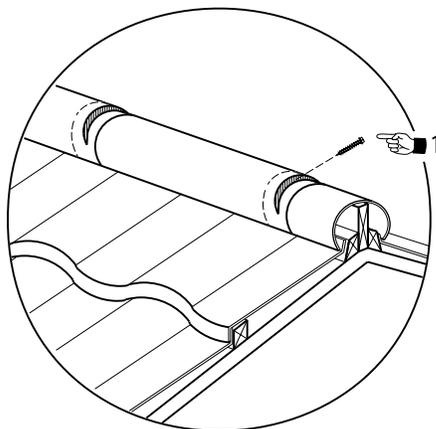
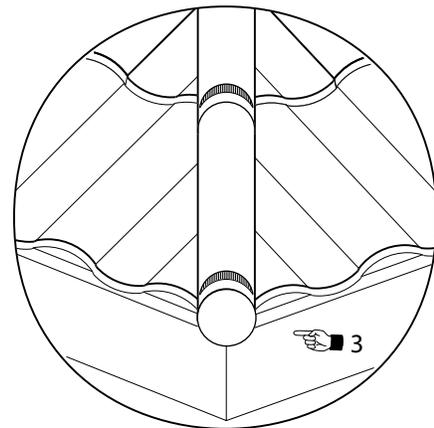
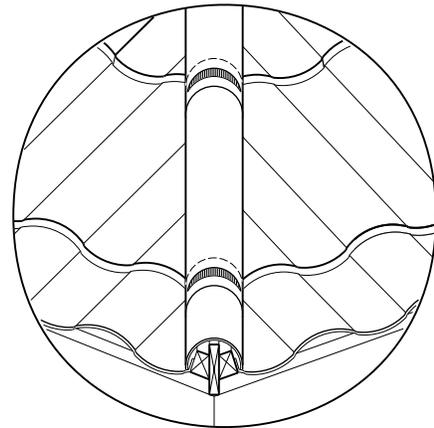
Ridge

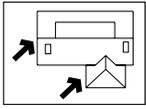
The barrel caps can be laid across the ridge in either direction and are fastened down through the top of the front flange into the ridge backer (note 1). The end barrel caps are coped to fit over the junction of rake or hip barrel caps (note 2). The exposed cut edges should be caulked with clear caulking then covered with chip and spray acrylic.

Hips

An end disc is installed in the first cap at the fascia (see note 1; page L-1). The barrel cap is then positioned, scribed and cut to ensure a tight fit of the disc to the panel and fascia (note 3). The balance of the barrel caps are then laid from the bottom up. Fastening is again down through the front flange into the hip board. The junction of the hip caps at the peak is similar to the rake installation above (note 2) where they are coped and lapped over.

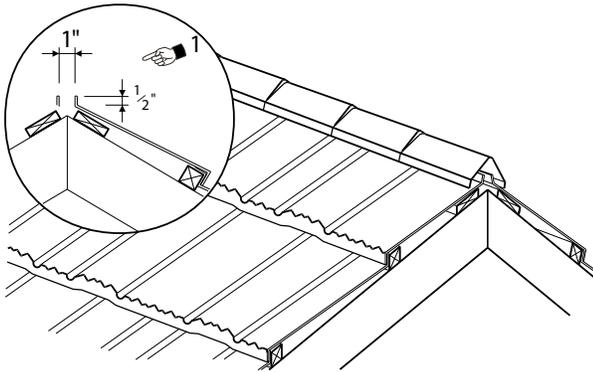
Note: The fitment and design of the barrel ends particularly at the hip is varied and considered to be an installer's signature. Please ensure that all voids are sealed to stop vermin and bird entrance.





Vented Ridge

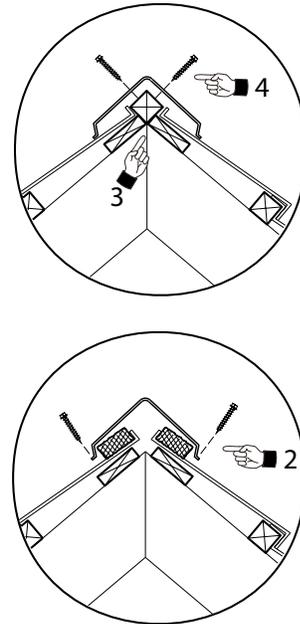
Bend and cut the top course of tile so as to leave a 1" (25 mm) gap and a 1/2" (12 mm) upstand centered on the ridge when ventilation is required (note 1). Place a strip of Versa Vent down each side of the ridge and place the trim over. Fasten the trim on each side down through to the 1" (25 mm) strapping (note 2).



Standard Ridge

If venting is not required then the panels are bent up against a 2" x 2" (50 x 50 mm) (note 3) with the trim placed over and fastened down through into the blocking (note 4).

Note: Adjust the angle of the trim to fit the roof plane.

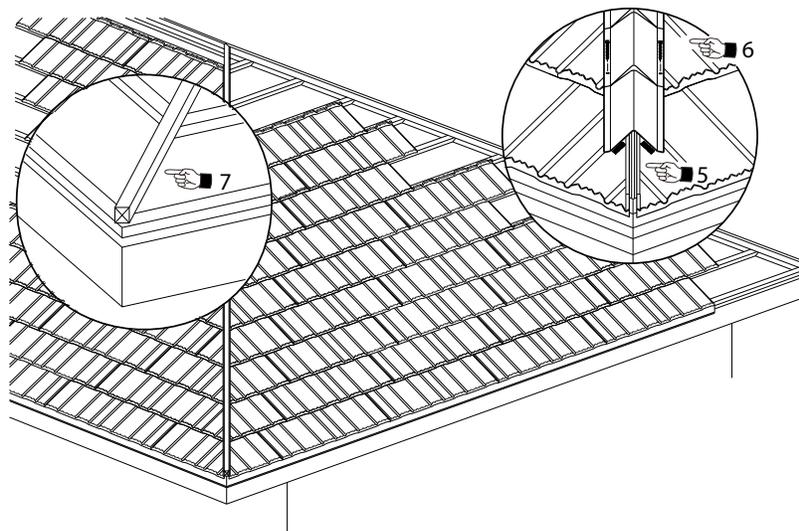


Vented Hip

The panels are bent up approximately 1/2" (12 mm) so as to leave a 1" (25 mm) wide gap up the center of the hip (note 5). Place a strip of Versa Vent up each side of the hip similar to note 2 above. Adjust the angle of the trim to equal the roof plane and fit over fastening the trim on each leg down into the tile battens (note 6).

Standard Hip

If venting is not required then the panels are bent up against a batten (note 7) centered on the hip. Adjust the angle of the trim and place it centered down the hip and fasten down into the tile battens. Snip each leg 3/4" (19 mm) at the panel upstand and bend the leg down tight to the panel to close the gaps as in rake installation on page L-3.

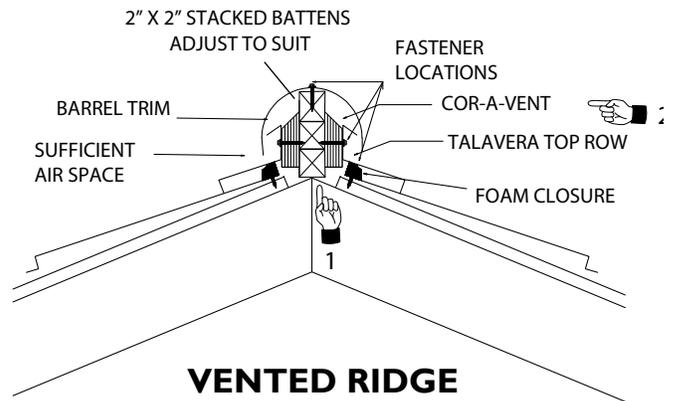


Installation Product Manual

Vented and Unvent Ridge Talavera SF Profile Only

Vented Ridge

Cut a slot in the deck $3\frac{1}{2}$ " (89 mm) wide at the ridge. If the roof is constructed with a ridge board, you will have to cut the slot wider. Install ridge board as shown (see note 1). Install COR-A-VENT on both sides of ridge (note 2). The last course of panels is cut off so as to allow 1" (25mm) of free air between sides. After fastening the front of the panel in normal fashion, fasten the top of the panel through the pan into the sheathing at the top. Install foam closure to top of panel. Position the two (2) pieces of Talavera Top Row wind soffit as shown sealing foam through Cor-a-vent to wood battens. Secure the vented top row to the panels with screws at the high portions of tile. The barrel caps trims can now be fastened to the stacked battens.

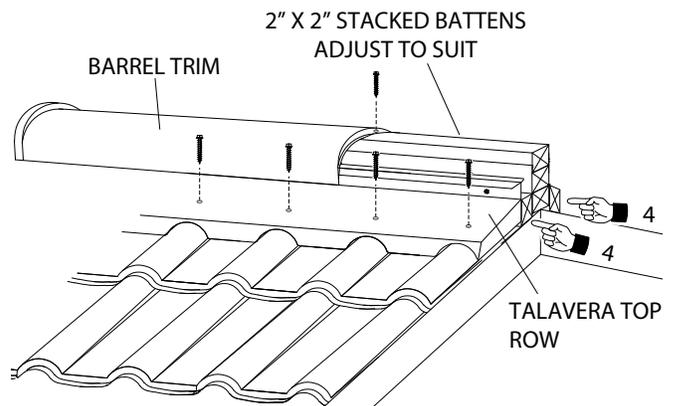
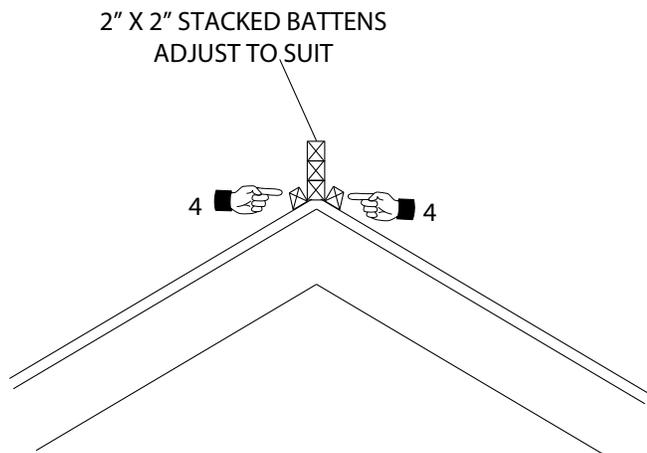
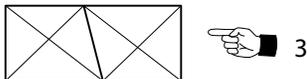
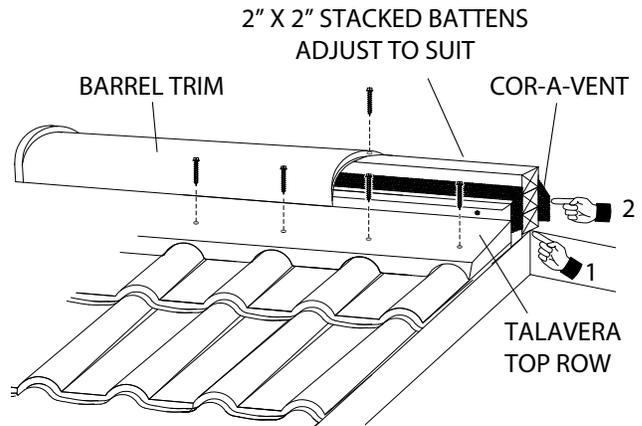


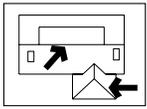
Note: Short course of panels at Ridge may require 1" x 2".

Unvented Ridge

A 2" x 2" Backer is centered on the Ridge. A batten is run parallel on each side of the Ridge Backer (note 4). A 2" x 4" ripped center on a 20°+ angle will produce better results for this application (note 3).

Note: Short course of panels at Ridge may require 1" x 2".



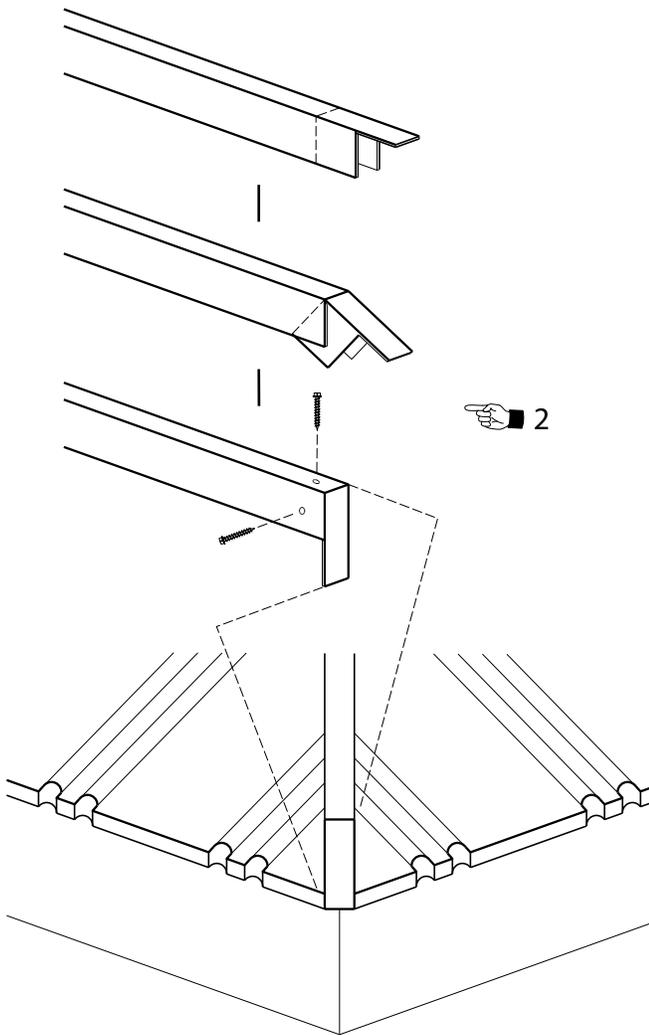


Installation Product Manual

Hip-Ridge Flashing Ridge/Hip Trim

Hip

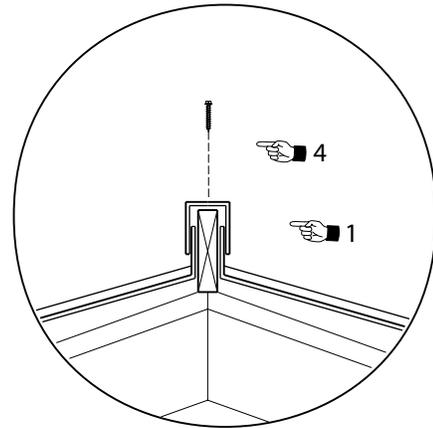
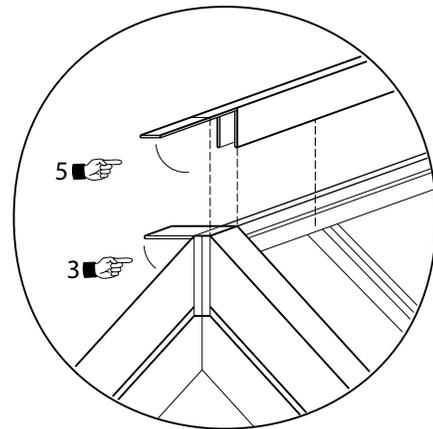
This trim is installed from the bottom up over the backer board (note 1) with a minimum lap of 4" (100 mm) at joints. The exposed end of the hip trim is cut, notched and folded (note 2). At the junction of the hip trim at the ridge, it is again cut, mitered and folded (note 3). The trim is fastened down through the top into the backer board (note 4).

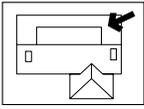


Ridge

The ridge trim is installed in the same manner as above. For end junctions with rake or hip, the trim is cut, notched and folded over (note 5).

Note: If nails are used to fasten the above trims, the heads should be caulked with clear caulking then covered with granules and spray acrylic.





Installation Product Manual

Wall Flashings Sidewalls and Crosswalls

Sidewall – All Products

The panels are cut and bent up against the 2" x 2" backer (note 1). Wall flashing is formed from 3" (76 mm) or 5" (172 mm) FGW and then fitted over and fastened to the wall (note 2) minimum 2' (610 mm) on center. Corners are lapped to standard sheet metal practises. The top edge (Gum Edge) of the flashing is then caulked as per instructions on the tubes of Allmet caulking (note 3). This detail is utilized mainly for re-roof applications. Alternately the panels can be bent up against the wall and sided over.

Cross Walls – "S" Tile

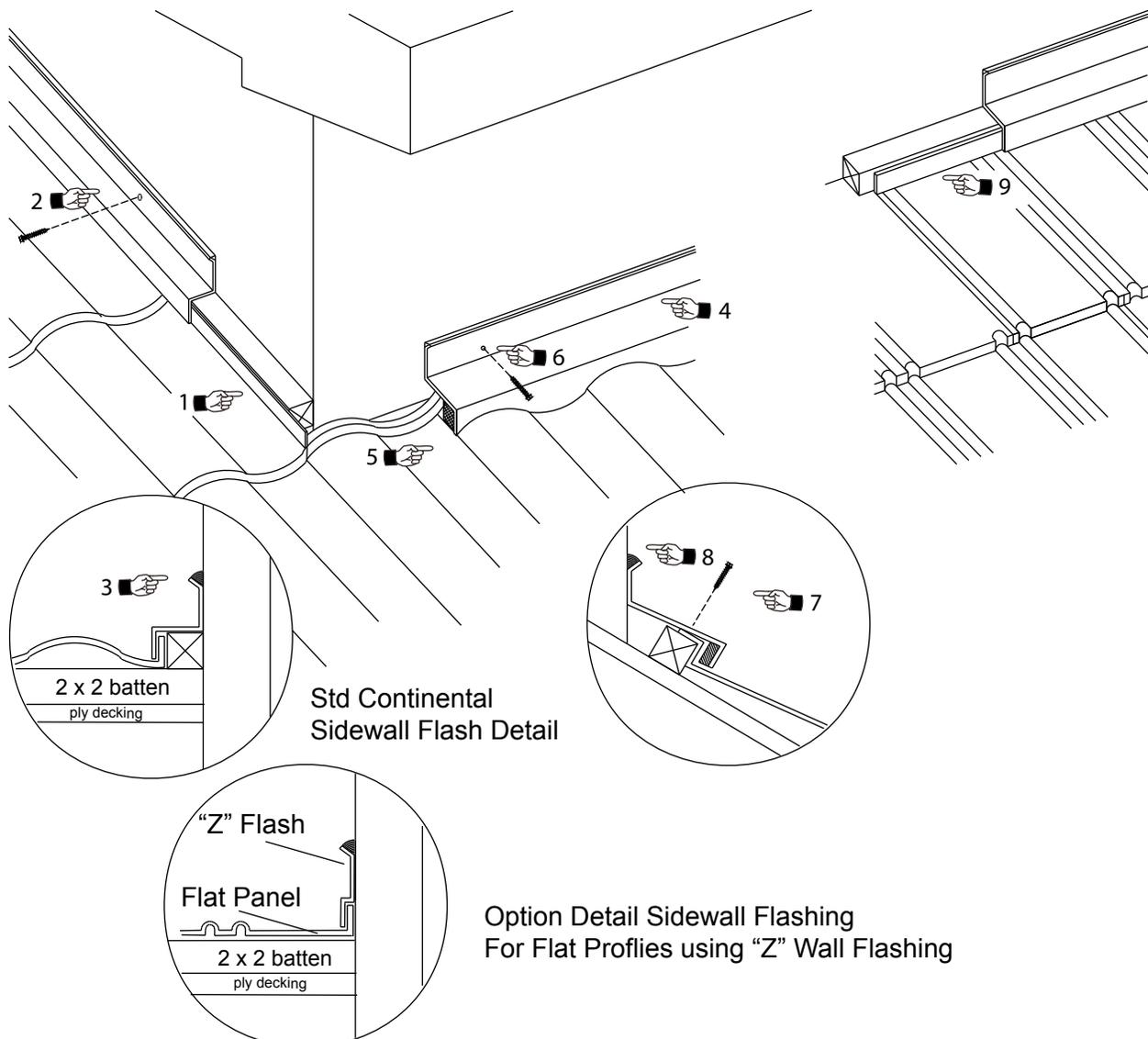
If the last full panel course is more than 3" (76 mm) away from a vertical wall then a course of panels

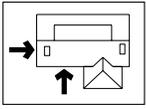
is cut and installed. If less than 3", Crosswall flashing is installed over as per (note 4). In snow climates, ridge foam should be installed (note 5). Again it is fastened to the wall (note 6) minimum 2' (610 mm) on center and down through the tile (note 7) at a minimum of 18" (457 mm) on center. The top edge (Gum Edge) is caulked (note 8).

Cross Walls – "Flat" Tile

The panel is cut and bent up against a 2 x 2 backer (note 9) which is similar to sidewall.

Note: Ensure that the panel upturns are to the top of the 2" x 2" blocking.



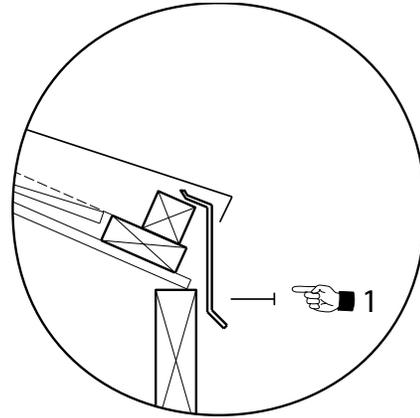


Installation Product Manual

Verge Trim Details FGW – Foam Closure – Bird Edge

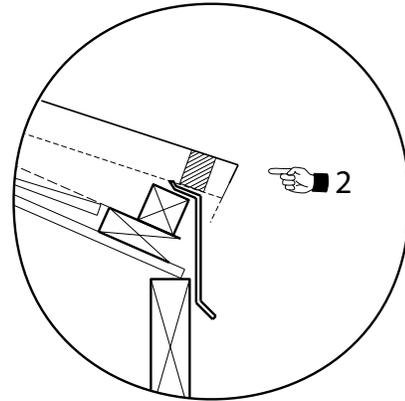
Fascia Gable Wall (FGW) - Eave

Place the FGW over the first batten or extended fascia board. Fasten down through the top flange at minimum 24" (610 mm) on center. In high wind areas, place additional fasteners in the face as required, being careful not to over tighten and buckle the metal (note 1). The FGW is available with a 3" leg to cover the 2" x 2" batten or 5" to cover existing roofing materials in re-roofing applications.



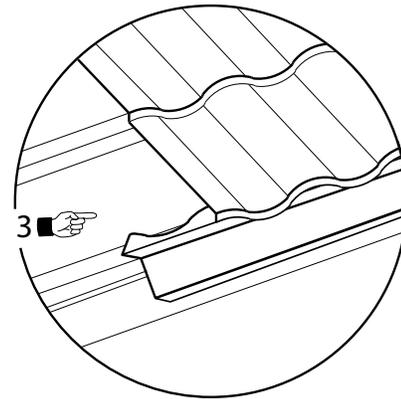
Eave Foam Closure

Eave foam is placed over the first batten or extended fascia board flush with the fascia, being careful to align the profiles with the panel. This should be temporarily fastened with galvanized nails, caulking or two-sided tape to hold in place while setting and fastening the tile.



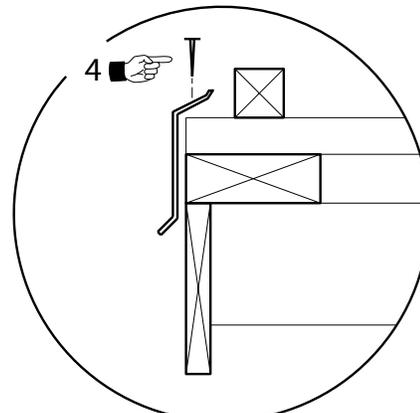
Bird Edge

This trim is designed primarily to fill the exposed void in the Continental tile profile at the eaves course. It is available with a 3" leg to cover the 2" x 2" batten or 5" to cover existing roofing materials in re-roofing applications.



FGW – All Products

FGW is designed to be used on re-roof projects where the trim will not cover over the additional built-up framing material. This molding is applied up the rake by nailing with galvanized nails at 24" (600 mm) on center through the top flange (note 4). This molding is positioned so the exposed edge of the gable trim follows the fold line. This trim is designed to match the metal bird edge and fascia metal.



Easy 5-Step Installation

- * Master Flash can be installed on-site quickly and easily, usually under 10 minutes.
- * One piece construction makes Master Flash easy to handle.
- * Bendable base forms seal with any contour, surface irregularities or roof pitch.
- * Seals tightly and dependably with silicone sealant to eliminate costly call-backs.
- * Pipe opening is easily customized with a sharp knife or scissors for any application.
- * Fix flashing to pipe with stainless steel hose clamp where snow load conditions exist.

1. Select and Trim

Choose appropriate Master Flash with opening at least 20% smaller than pipe diameter. If necessary trim opening to 20% smaller than pipe diameter.

2. Slide

Slide Master Flash down over pipe. (A non-petroleum based lubricant will ease installation.)

3. Form

Press Master Flash down, bending it to conform to roof profile or roof irregularities. A blunt tool will help press flashing into tight roof angles.

4. Seal

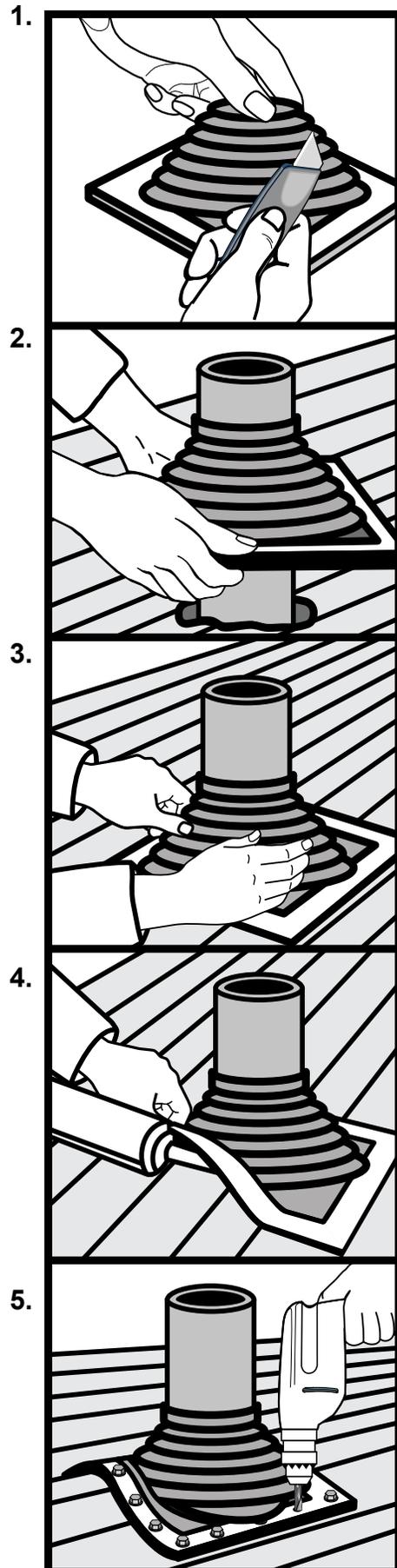
Apply silicone sealant between base and roof.

5. Fasten

Use fasteners to complete sealing. For UPC® installation, may not exceed 1 1/2 (38 mm).

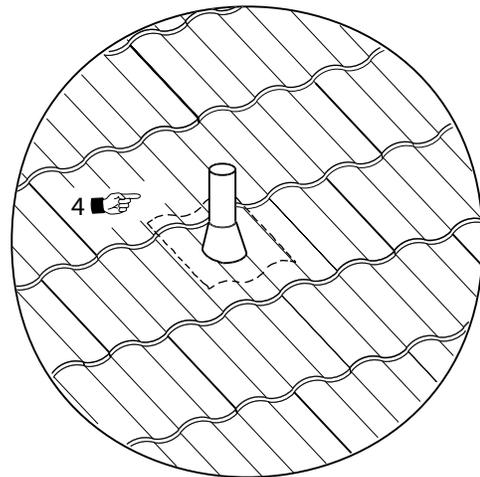
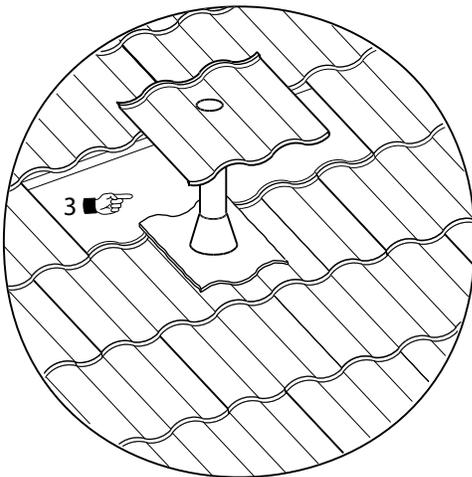
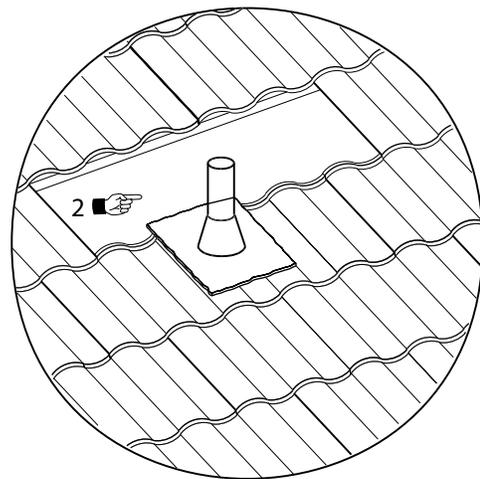
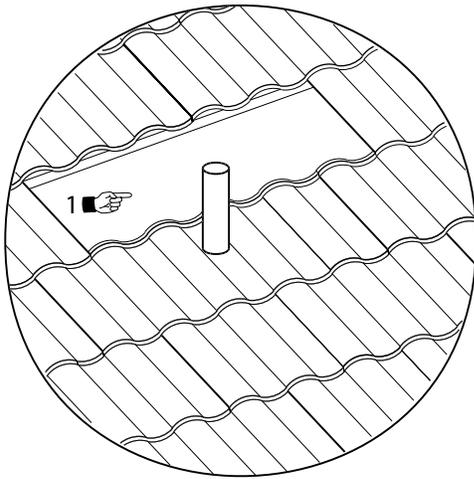
Note:

Optional for further protection install **Pipe Jack Tray** per details page 61. Ensure sealing around roof pipe and **Pipe Jack Tray** prior to installing cover panel and **Masterflash**.



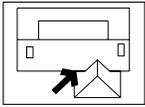
The panel is cut to fit over the plumbing stack (note 1). A standard Neoprene or Metal Jack Flashing is then placed over (note 2). A short piece of panel is cut with a slightly larger hole to counter flash the Jack Flashing (note 3). The next course of panel can now be laid through (note 4).

Note: For aesthetics it is suggested to paint or granular coat the stack (at the installers option).



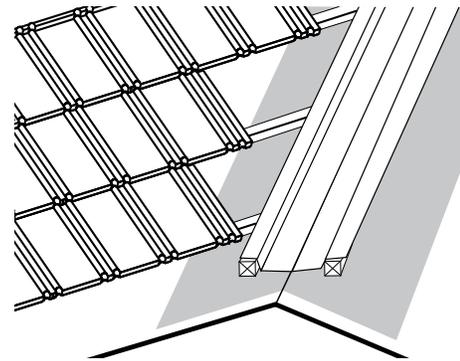
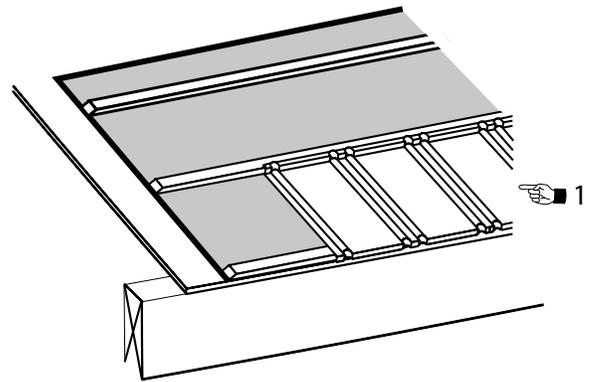
Underlayment

Section Five



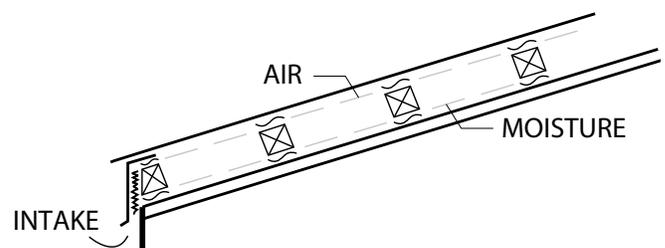
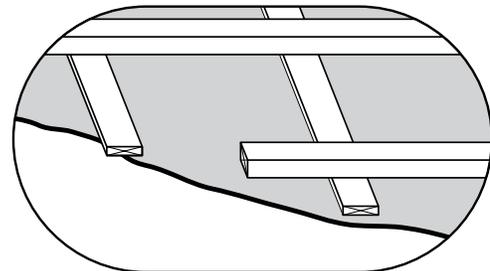
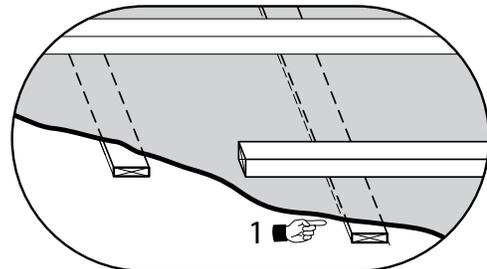
General

Most building codes require underlayment and we recommend a minimum of 15 lb felt. Penetrations in the membrane such as plumbing stacks should be sealed with a Tyvek-type, however, as the underlayment serves as a moisture barrier only in the majority of cases, it must allow air to migrate through from the assembly below. Additionally, they may require eaves protection and protection under the valleys. In areas that have occasions of severe weather conditions, we recommend that a self adhesive / sealing ice and water shield be used for the eaves (note 1) and valley (note 2) areas.



Low Slope

After the pitch of the roof falls below 4:12 in cold weather climates and 3:12 in warm weather climates, additional protection must be provided under the roof system. The types of additional measures are related to a number of factors such as slope, roof area, configuration, location, etc. Minimum, a reinforced underlayment similar to TriFlex 30 should be considered; however a good quality self-sealing/adhesive ice and water shield provide excellent protection. Additional consideration may need to be given so that the 2" x 2" battens do not forma dam. The 2" x 2" could be raised off the deck by installing vertical strapping. Check local building code requirements to ensure proper installation.



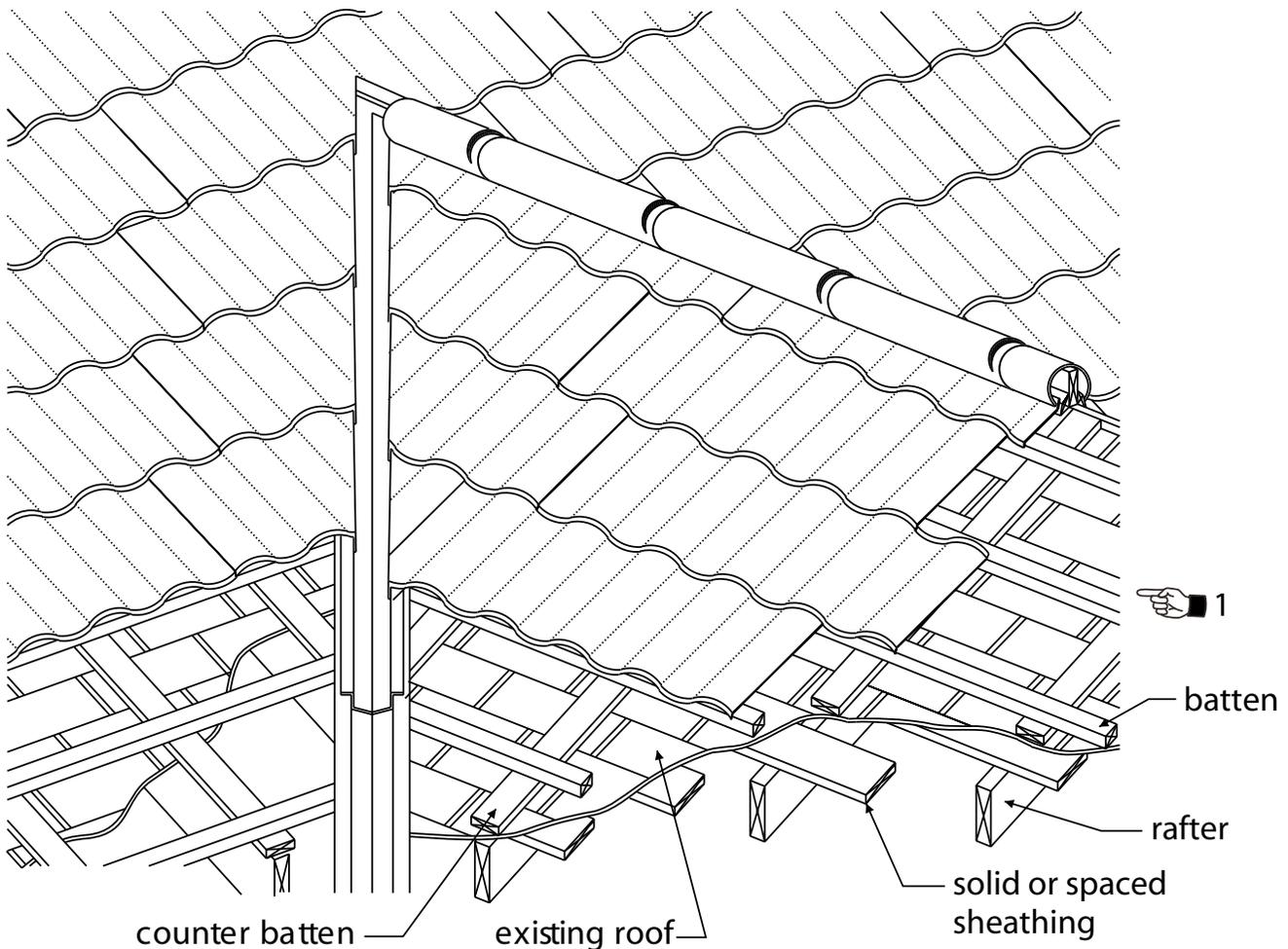
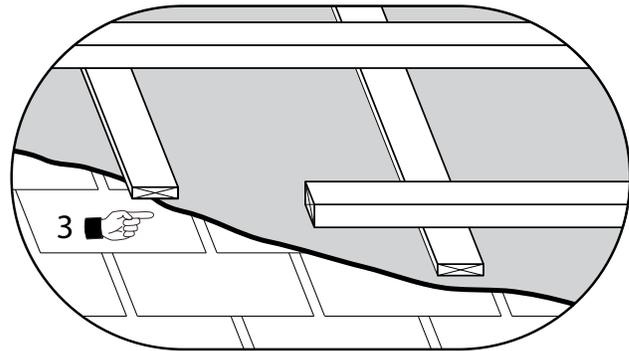
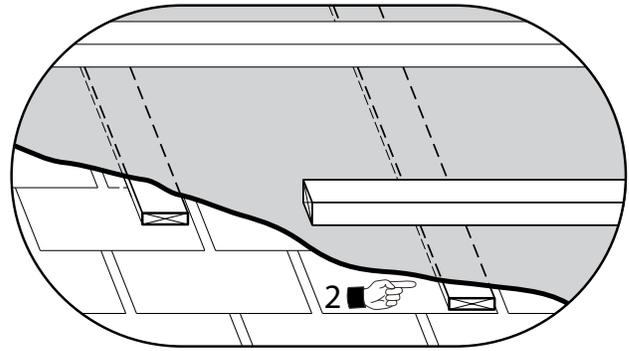
Installation Product Manual

Re-roofing Over Wood Shingles or Shake Underlayment

Prepare the roof edges as noted on page. Minimum 1x4 (25 x 100 mm) counter battens are placed vertically over the rafters and fastened through the existing roofing with nails of sufficient length to penetrate 1" (25 mm) into the framing member or through the sheathing, whichever is less (note 1).

Some existing roofing membranes may be in sufficient condition to perform as the underlayment. If the material is insufficient to use or if local building codes require a new underlayment, we recommend it be installed over the counter battens whenever possible (Note 2).

Some building codes require the existing roof to be covered to fire block the cavity space. In this instance an approved covering material similar to Elk Versa Shield must be laid over the existing roof material prior to installing the counter battens (note 3).



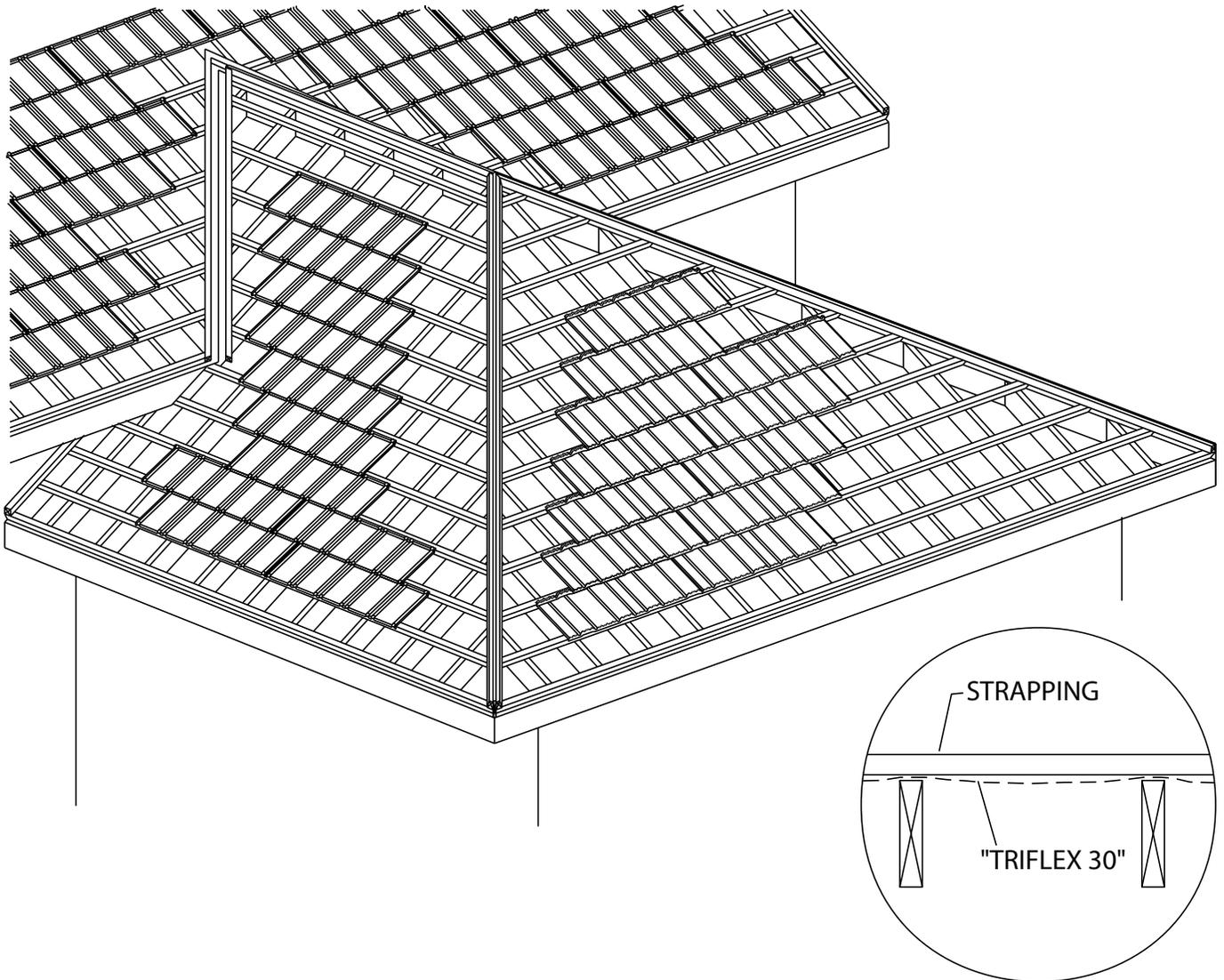
Installation Product Manual

Open Rafter Application

When permitted to install on open rafters, most local codes call for underlayment. Allmet recommends that a reinforced product be used similar to Triflex 30. Extra care should be given to installing the underlayment straight, tight and neat with sufficient laps. Particular attention should also be given at valleys and roof penetrations. Extra care should be taken to ensure accurate fitment of the panels from battening through to cutting and bending.

Note:

1. Please tape all side laps and roof penetrations with house wrap tape.
2. If the Allmet panels are installed without underlayment on open rafters please realize that differentiating air pressures can occur which could siphon snow or other elements into the building. Consideration should be given to building location, local weather conditions and intended use.



**Maintenance
Accessories
General Notes**

Section Six

General

When access is required on an Allmet roof on a regular basis (i.e. to service an air conditioner, chimney, etc.), we recommend that the following measures be taken to provide for extra strength and durability.

Continental

Install an intermediate 1" (25 mm) batten under the traffic area (note 1) with a double wide strip of ridge foam placed profile up in line with the profile of the tile (note 2).

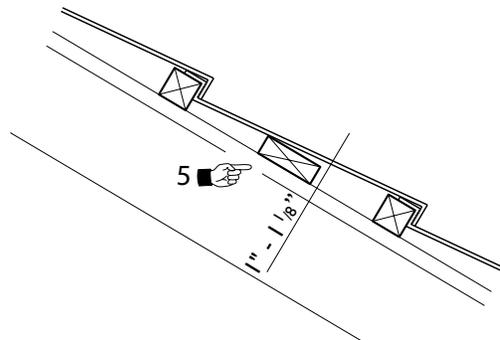
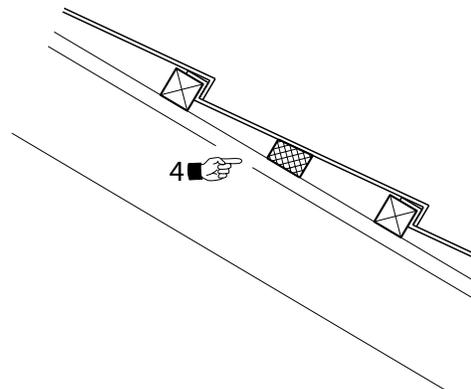
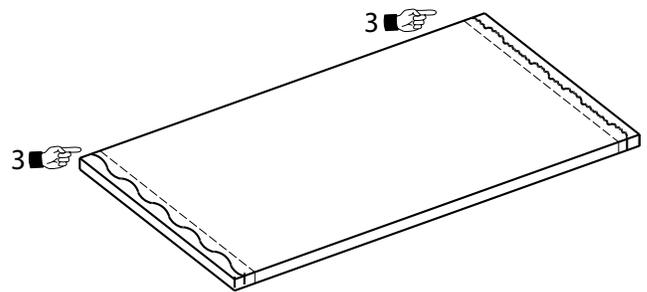
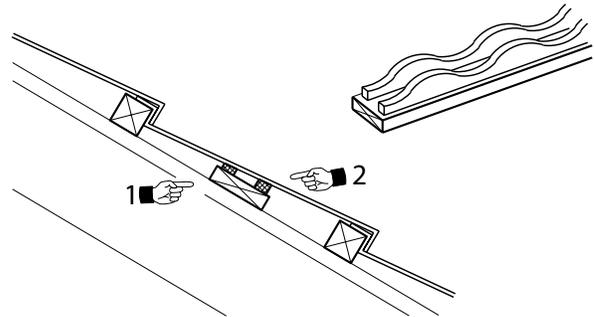
Trace the pattern onto a sheet of 1 1/2" or 2" (38 or 50 mm) bead board insulation and cut a profiled filler strip (note 3) to fit centered between the battens either direct on solid sheathing (note 4) or over a 1" (25 mm) support batten (as above). If you cut across the width of the sheet (4') (1219 mm) which is approximately the same length as one panel, one cut will provide 2 pieces on the tile profile.

Shadowline

Install an intermediate batten of the required thickness. Typically this will be 1"-1 1/8" (25-29 mm) when the tiles are installed on 2" x 2" nominal battens (note 5). Note this could also be substituted with 1" (25 mm) bead board cut into 3" to 4" (75 to 100 mm) wide strips when installed over solid sheathing.

TIPS:

1. Double up on the panels in this area. This will provide the customer with additional strength as well as replacement product if a panel gets damaged.
2. Use different colored screws to denote the reinforced walk area.



Installation Product Manual

Working on a Completed Allmet Roof System Continental, Shadowline, and Woodshake

When it is required to have trades people work over a completed Allmet installation, we recommend that the following precautions be taken.

1. Please review with all trades people the proper procedure for walking on an Allmet roof system as outlined in this product manual. For additional information specific to your needs, please contact the Allmet technical department.
2. Take dated photographs of the roof condition upon completion of installation and /or prior to having the trades people working over the roof. This is a valuable reference tool in identifying subsequent damage. If damage does occur contact the Allmet technical department to discuss the appropriate repairs such that it does not negatively affect the warranty.
3. The Allmet coating is comprised of stone granules bonded to the steel with acrylics. Latex paints, stucco, and mortar droppings will stain the coating when they come in prolonged contact and if left will create a permanent bond. Solvent based paints will attack the coating creating permanent damage. Please contact Allmet technical department to review repair procedures.
4. It is best to construct a work platform over the roof to protect from traffic and spillage as follows:
 - A. For Continental tile, we recommend placing 2 x 2 sleepers vertically in each pan of the tile fastened at the ridge for safety and then laying plywood over as a work area. Fasten the plywood to the 2" x 2" ensuring the fasteners do not penetrate through the strapping into the metal roof.
 - B. For Shadowline and Woodshake, we recommend placing 1 x 4 or 2 x 4 sleeper vertically in the flats of the tile fastened at the ridge for safety. Fasten the plywood to the wood sleepers ensuring the fasteners do not penetrate through the strapping into the metal roof.

Caulking

We recommend that the caulking be checked for cracking and signs of undo stress every 5 years on any roof system. As caulking is typically utilized at intersections associated with differing roof and wall planes, as well as with mechanical roof protrusions, one must recognize the different expansion rates of these materials to appreciate the stress the caulking must be subjected to which is why we recommend and supply a long life thermal plastic rubber based sealant that is compatible with our roof coating.

Washing

The Allmet coating in general terms, is comprised of acrylic and ceramic stone that does not support fungi growth. However if you wish to remove any discoloration from airborne pollutants and/or fungus off your roof then we recommend washing it with a mild solution of chlorine (2%) and detergent. This should be applied and rinsed with a low pressure washer. Moderate scrubbing with a soft bristle brush may be used on tougher stains. For stucco and mortar droppings, moisten the area slightly and use moderate pressure with a wooden paddle to try and dislodge. After cleaning the area, it should be dried and inspected for coating damage. Touch up moderate scuffing with the spray acrylic and granular, however, for more severe cases contact the technical department at Allmet. Please note the sections on the previous page regarding footwear and roof traffic.

Gutters

When gutters have been installed on the eaves of the roof, ensure that they are below the plane of the roof. Gutters should be cleaned regularly so that the water will drain freely and not back up on or under the Allmet roof system. Please do not walk on the roof to perform this task, however, if required please refer to pages A-1, T-1 and T-2 for instructions on walking on the roof.

Installation Product Manual

Chimneys

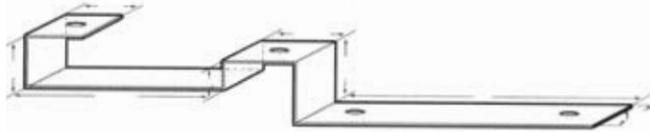
Chimneys typically create the most problems associated with a roof, especially stone or masonry. The warm gases escaping up the flue warm the chimney structure and in cold weather create substantial differential movements especially in 2-3 story homes with basements. As well, the warm masonry tends to absorb winter moisture, which can freeze as the temperature drops causing the masonry to spall and leak behind the flashings. Extra attention should be paid to stone chimneys as some stone is very porous to the point of being sponge like.

Inspect the chimneys for signs of differentiating movement, moisture stains, cracking, spalling and make the proper repairs. The masonry and stone can be sealed taking care to protect the roof surface. Flashing and caulking should be adjusted to compensate for any differential movements.

Installation Product Manual

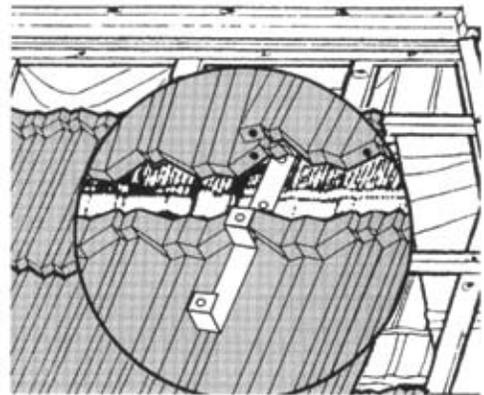
Special Installation / Optional Accessories Optional Mounting Bracket

“Aussie” Universal Interlocking ‘J’ Roof Mounting Bracket (Patent Pending)



This special Universal ‘J’ Bracket can be installed with all batten systems. It provides a clean weatherproof installation of a strong galvanized Universal ‘J’ Bracket that can be used for mounting: solar panels, air conditioners, swamp coolers, roof walk ways, etc. to the roof.

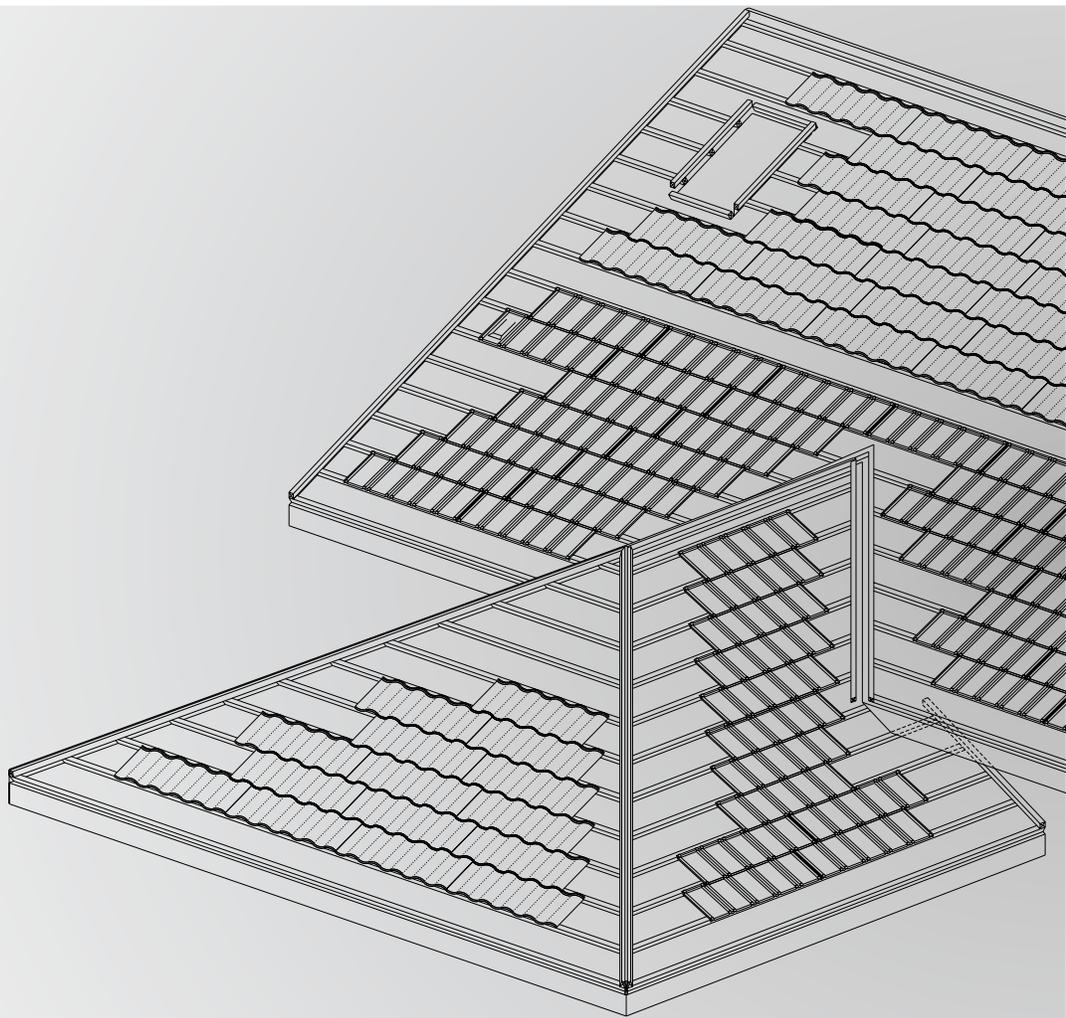
1. Secure Universal ‘J’ Bracket
2. Fit Allmet panels around ‘J’ Bracket and secure as normal
3. Install horizontal support material and secure to ‘J’ Bracket



Always locate the Universal ‘J’ Bracket over and above where the rafter/ 1” x 4” (25 x 100 mm) batten is located.

Installation of the Universal “J” Bracket varies and is at the discretion of the end user. Refer to the “Aussie” website at www.aussieroofing.com for further product information.





Allmet Roofing Products™

P.O. Box 220
Property # 581, R. R. #2, Hwy #3
Courtland, Ontario, Canada N0J-1E0

P: 519-688-2200

F: 519-688-2201

T: 800-265-9357

E-mail: allmet@Allmet.com

Website: www.Allmet.com

Please Note: It is the responsibility of the installer to check the website for any updates or changes in the application of this product(s).