SLATE SHIELD™

SLATE SHIELD™ INSTALLATION PROCESS

THE FINEST LIGHT WEIGHT SLATE INSTALLATION PROCESS

INSTRUCTIONS AND INSTALLATION MANUAL

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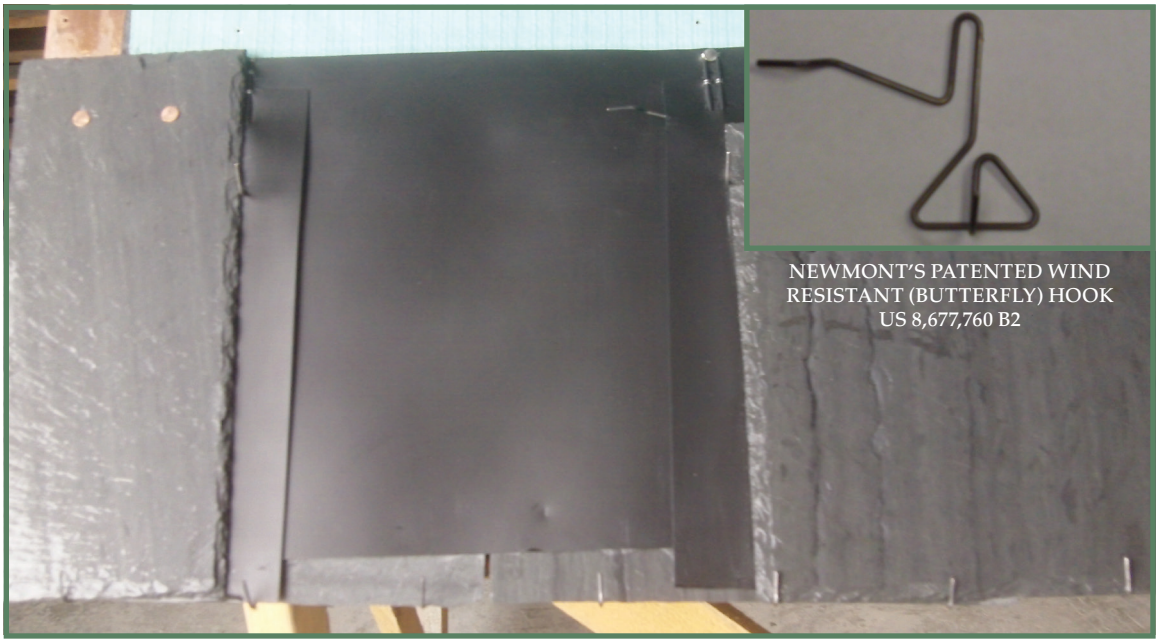
SLATE SHIELD™ installation uses the traditional, tried and true, method of applying roofing slate with hooks. Introducing the patented Wind Resistant (Butterfly) Hook, wherein each slate is mechanically attached to the two slates beneath it, achieving a totally integrated roof, no one slate can be lifted by hurricane wind force without lifting the two slates beneath it, which are in turn attached to the four slates beneath those - ad infinitum... The results: the ultimate wind resistant slate roof, unparalleled in safety and performance.

The **SLATE SHIELD™** installation process utilizes the traditional slate hook method with the addition of placing a series of hooks, pre-applied on a water repelling panel, therein creating a super fast and light weight application and a superior attachment of the slate to the roofing surface. All **SLATE SHIELD™ WIND RESISTANT (BUTTERFLY) HOOKS** are 10 gauge stainless steel anodized black for maximum strength and beauty. Indeed, most of Europe uses hooks to install roofing slate. European slate roofs have lasted hundreds of years and some predate the American Revolution.



NEWMONT'S PATENTED WIND RESISTANT (BUTTERFLY) HOOK US 8,677,760 B2

SLATE SHIELD™ LIGHT WEIGHT HDPE WEATHER RESISTANT PANEL WITH BUTTERFLY HOOKS AND EXTENDER STRIPS, WITH NEWMONT'S VERMONT BLACK SLATE INSTALLED IN THE DRIP EDGE.

FAILURE TO FOLLOW INSTRUCTIONS
MAY RESULT IN VOIDING OF ALL WARRANTIES.
REMEMBER SAFETY FIRST

PLEASE, BEFORE YOU BEGIN, READ THE ENTIRE INSTRUCTION MANUAL

Personal Protective Equipment (PPE) & Safe Work Practices:

Eye and Face Protection, Hand Protection, Head Protection & Safety.

- Safety glasses or face shields are worn anytime work operations can cause foreign objects getting into the eye such as during cutting and nailing. Wear safety glasses; with side shields.
- Workers should wear work shoes or boots with slip-resistant and puncture resistant soles.
- Gloves should fit snugly. Workers should wear the right gloves for the job.
- Workers shall wear hard hats where there is a potential for objects falling from above, bumps to their heads from fixed objects, or of accidental head contact with electrical hazards.
- Hard hats are to be routinely inspected for dents, cracks or deterioration, replaced after a heavy blow or electrical shock and maintained in good condition.
- Scaffolds should be set on sound footing and follow all OSHA Approved Regulations.
- Follow manufacturer's tool labels and operating manuals, when using nail guns.
- Never defeat or modify safety features. The tool must meet applicable OSHA guarding standards.
- Keep fingers away from trigger when not driving nails.
- Sequential tools have reduced risk of accidental and double firing.
- Avoid line of fire hazards in front of and behind material; position yourself (especially your free hand) out of the line of fire. Never point a nail gun at anyone. Watch out for coworkers Disconnect the gun to perform maintenance, move to another work area or clear jams.
- Train on safe operating procedures, proper body placement and correct PPE use.

Materials & Estimating Amounts Needed:

Measure roof area. Measure length of eves, ridge, rake/ gable end and any hip.

- SLATE SHIELD™ HOOK AND PANELS: Needed to cover 100 sq/ft= 1 Square
- SLATE SHIELD™ COPPER CLAD DRIP EDGE ™ : 4 feet long each
- SLATE SHIELD™ FIELD SLATES Needed to cover 100 sq/ft = 1 Square
- SLATE SHIELD™ RAKE , VALLEY & TRIM SLATES: Number of Lineal Feet
- RAKE & GABLE END MATERIAL: 26 gauge Stainless Steel Or Copper Clad
- FLASHING &- VALLEY MATERIAL: 26 gauge Stainless Steel Or Copper Clad
- NAILER - Pneumatic Or Hand Held Hammer or Screw Gun
- NAILS -Stainless Steel Ring Shanked- or Stainless Steel Screws of similar length.
  Min. 25.40mm, 1"-1 1/4" for SLATE SHIELD™ HOOK & PANEL
  Min. 38.10mm, 1 1/2" - 1 3/4" for SLATE SHIELD™ Trim, Rake & Field (where needed)

*** SLATE SHIELD™ recommends adding 5% to all finished quantities/measurements, needed - for waste allowance and breakage.**

To be installed upon roof decking of Minimum 19/32" APA rated exterior grade plywood with ASTM D 1970 roof deck leak barrier protection, on roofs of 5X12 pitch or greater. **NEVER INSTALL ON ROOF SLOPES LESS THAN 5:12.**

PLEASE CONSULT YOUR LOCAL BUILDING CODES. Local codes may vary.

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INSTALLATION: always install SLATE SHIELD™ ROOF INSTALLATION PROCESS from bottom (eves) to top (ridge).

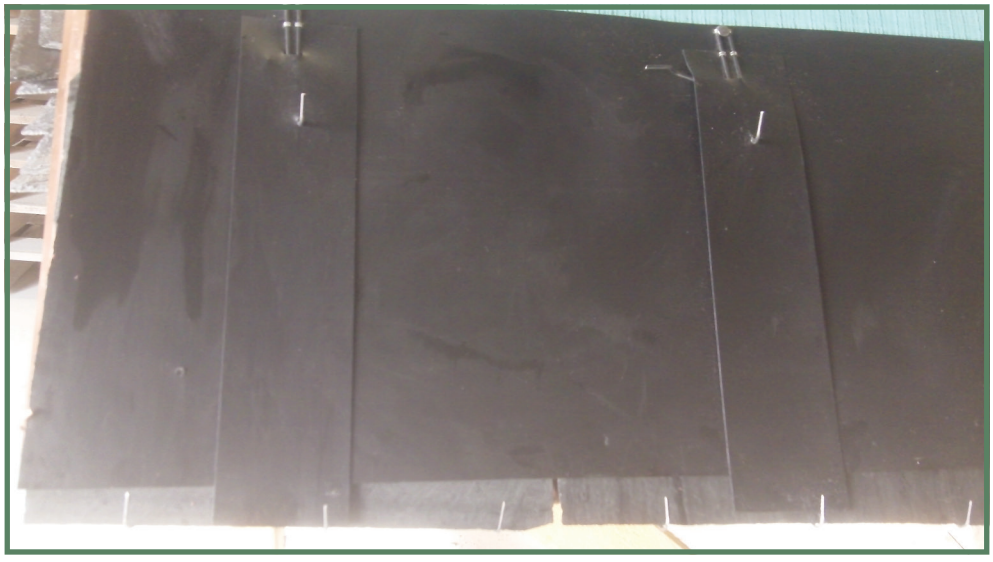
1. INSPECT ENTIRE PREPARED ROOF DECK.

- Insure all surfaces are clean, dry, even, no holes or tears in decking or leak barrier, all nail heads and/or fasteners are flush with deck surface and covered.
- Install SLATE SHIELD™ DRIP EDGE™, SLATE SHIELD™ RAKE EDGE, and all valley metal - MAKE SURE LEAK BARRIER EXTENDS OVER ALL METAL AND COVERS ALL NAIL AND FASTENER HEADS.
- Place starter slates in the patented NEWMONT DRIP EDGE™
  (See Picture)

ROOF DECK PREPARED WITH WATER SHIELD, DECK ARMOUR, PATENTED NEWMONT DRIP EDGE AND RAKE.

PREPARED ROOF DECK WITH STARTER / UNDER EVE SLATES BENEATH FIRST SLATE SHIELD PANEL IN DRIP EDGE.

- **Install a SLATE SHIELD™ panel, starting at the rake edge, place the bottom edge of the 3 inch wide Extender Strip* within the hook section on the rake edge and even with the bottom edge of the starter slates. The top edge of the Slate Shield™ panel will be approximately 14 inches up the roof, as measured from the bottom edge of the starter slates and extending approximately four feet (4') along the eves in the hooks of the SLATE SHIELD™ DRIP EDGE ™.**
  REMEMBER, nail with a 1"- 1 1/4" stainless steel nail in each eyelet of each Wind Resistant Hook (Butterfly Hook). (Coiled Stainless Steel Ring Shanked Nails Provided).

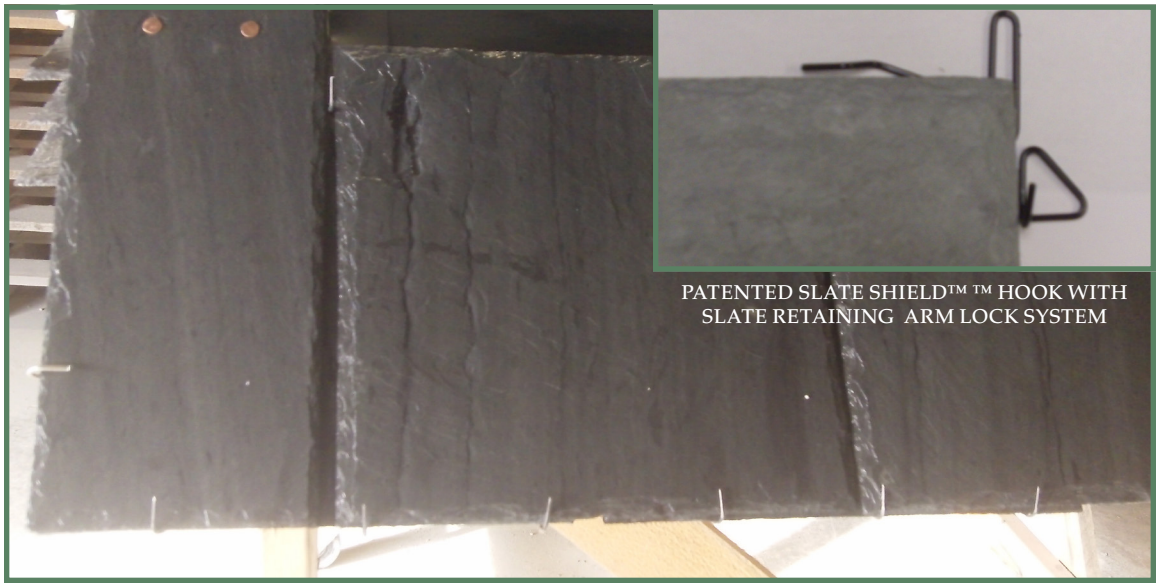


FIRST (1st) SLATE SHIELD™ PANEL INSTALLED (NOTE: TRIMMED FOR HALF SLATE)"

- REPEAT this process with additional panels of SLATE SHIELD, over lapping approximately ten to twelve inches (10”- 12”) each successive SLATE SHIELD™ panel. The starting edge of each panel will be inserted/tucked beneath the last extender strip of the previous SLATE SHIELD™ panel, continue until reaching the other rake/gable end or valley.

SLATE SHIELD™ PANEL IN DRIP EDGE WITH NEXT PANEL BEING INSTALLED – PLEASE NOTE . PANEL IS INSERTED/TUCKED BENEATH THE LAST EXTENDER STRIP OF THE PREVIOUS SLATE SHIELD™ PANEL

- **RETURN** to the rake/gable end and begin placing SLATE SHIELD™ field slates on top of the SLATE SHIELD™ panels and within the hooks of the SLATE SHIELD™ DRIP EDGE and beneath the Slate Retaining Arm of the lock system, continue until reaching the other rake/gable end or valley.
  REMEMBER all rake slates WILL BE 2” LONGER (ie: in an application of 12X12’s — all rake and valley slates will be 14X12’s) and must be nailed.



PATENTED SLATE SHIELD™ ™ HOOK WITH SLATE RETAINING ARM LOCK SYSTEM

FIRST ROW OF SLATE SHIELD™ SLATES INSTALLED OVER PANEL IN HOOKS- PLEASE NOTE: LONGER RAKE SLATE NAILED AT TOP AND USE OF ALTERNATING HALF AND FULL WIDTH SLATE AT RAKE/GABLE END.

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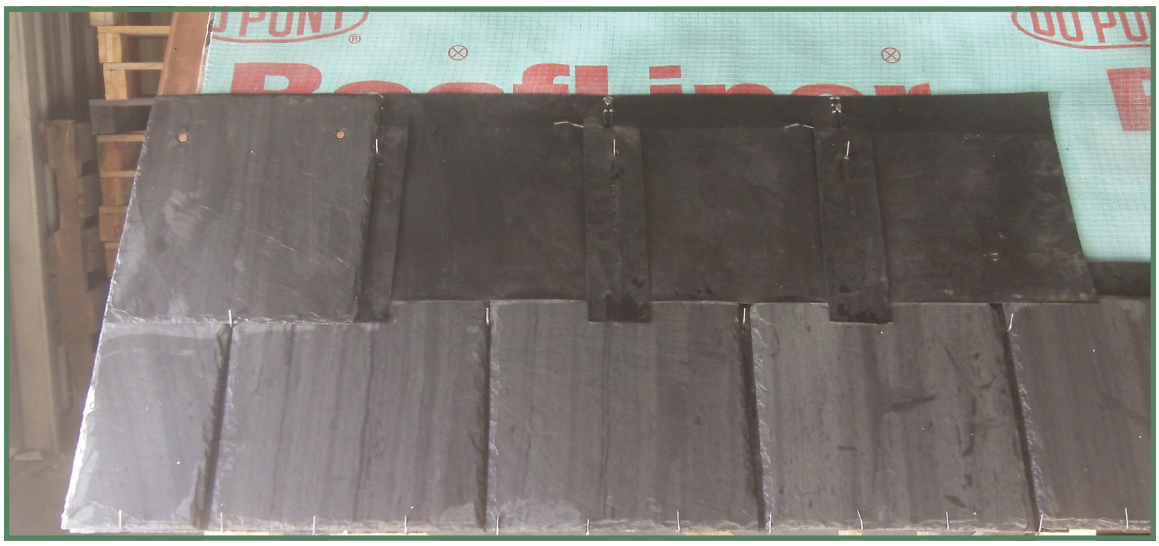
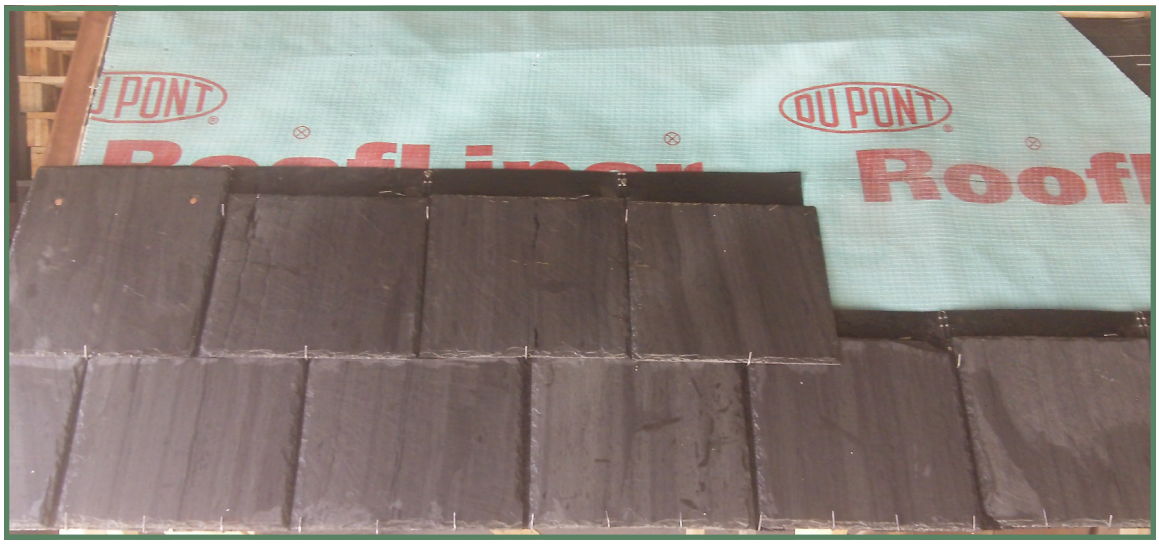
- **RETURN** to the rake/gable end and nail first SLATE SHIELD™ panel of the Second Course over the top edge of the First row of SLATE SHIELD™ FIELD SLATES. Place the SLATE SHIELD™ panel for the second course, for proper alignment so successive slate courses will fall at correct intervals, in the hooks with the bottom edge of the extender strips sitting in the hook section of the first course, the top of the Slate Shield™ Panel (2nd course) will be approximately 24 inches up the roof, as measured from the bottom edge of the starter slates/ edge of first course.
  Note: Each successive course will be placed at approximate 10 inch intervals up the roof.



SECOND COURSE/ ROW OF SLATE SHIELD™ SLATES INSTALLED OVER PANEL IN HOOKS-
PLEASE NOTE LONGER RAKE SLATE NAILED AT TOP(AGAIN) AND POSITION OF EXTENDER STRIPS.

- **AGAIN- REPEAT** this process with additional panels, over lapping panels approximately ten to twelve inches (10"- 12"). Each successive Slate Shield™ panel is positioned along side the other, adjacent to and overlapping, with the successive panel's edge tucked/placed beneath the extender strip of the preceding installed panel, then each patented Wind Resistant Hook (Butterfly Hook) is nailed with a 1"-1 1/4" stainless steel nail. Continue this process until reaching the other rake/gable end or valley.
- **RETURN** to the rake/gable end and begin placing SLATE SHIELD™ field slates on top of the SLATE SHIELD™ panels of the 2nd course and within the hooks of the first installed course of SLATE SHIELD™ panels and beneath the Slate Retaining Arm of the lock system, continue until reaching the other rake/gable end or valley of the second course. REMEMBER all rake slates WILL BE 2" LONGER (ie: in an application of 12X12's – all rake and valley slates will be 14X12's) and must be nailed.

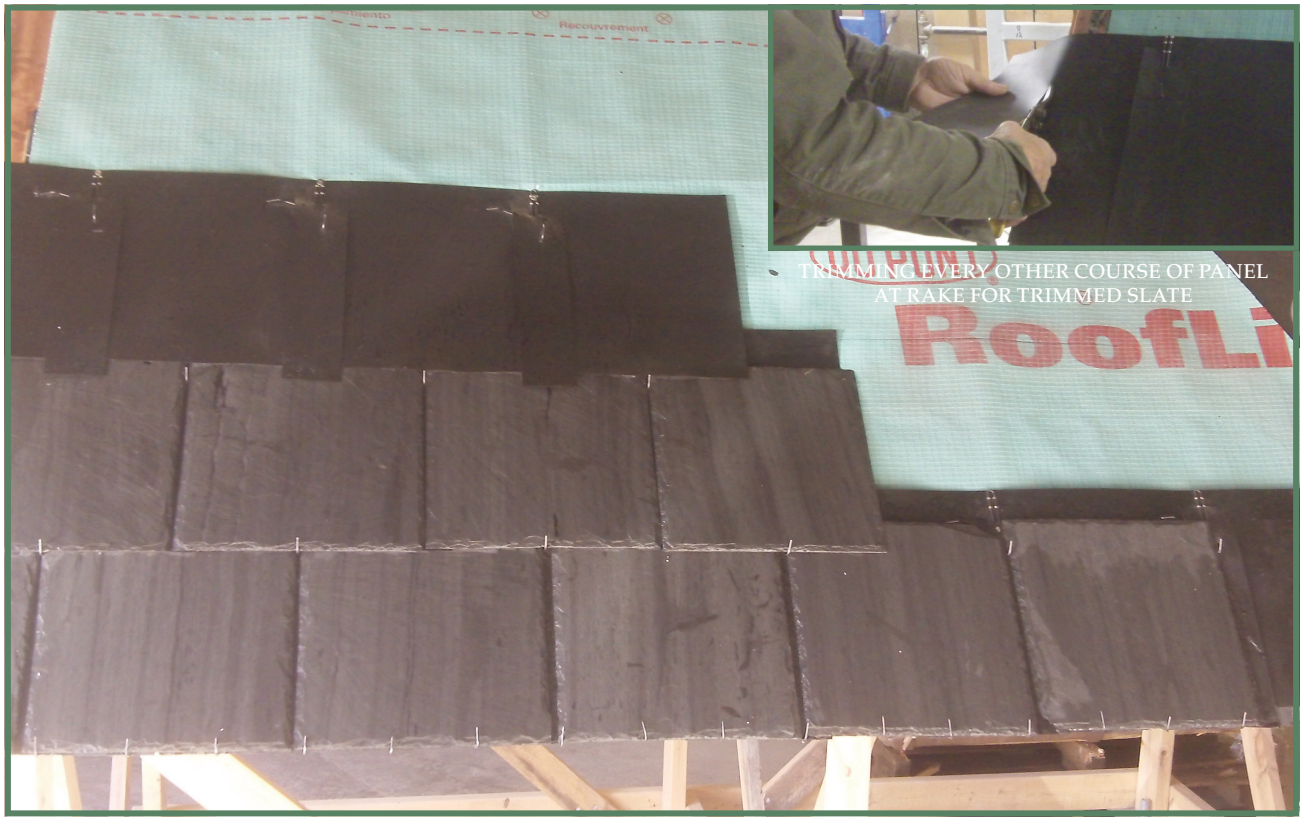


CONTINUATION OF SECOND COURSE/ ROW OF SLATE SHIELD™ SLATES INSTALLED OVER SLATE SHIELD™ PANEL IN HOOKS AND HELD IN PLACE BY THE RETAINING ARM OF THE LOCK SYSTEM.

IMPORTANT YOU MUST NAIL EACH HOOK IN THE EYELET, ON EVERY PANEL.

*** IMPORTANT- every other course must begin with a one half slate at the gable/rake end to insure correct alignment of slate -staggered vertical joints/gusset from course to course.**

- **AGAIN- Install a SLATE SHIELD™ panel, starting at the rake edge (place the edge of the Extender Strip within the hook section of the panel beneath) extending approximately four feet (4'), along and in the hooks on the just nailed SLATE SHIELD™ panel.**



THIRD COURSE SLATE SHIELD™ SLATES BEING INSTALLED- PLEASE NOTE TRIMMED PANEL AT RAKE.

- **<u>AGAIN- REPEAT</u> this process with additional panels, over lapping panels approximately ten to twelve inches (10"- 12"). Each successive Slate Shield™ panels is positioned along side the other, adjacent to and overlapping, with the successive panel's edge tucked/placed beneath the extender strip of the preceding installed panel, then each patented Wind Resistant Hook (Butterfly Hook) is nailed with a 1" - 1 ¼" stainless steel nail. Continue this process until reaching the other rake/gable end or valley.**

- **AGAIN- RETURN to the rake/gable end and begin placing SLATE SHIELD™ FIELD SLATES on top of the SLATE SHIELD™ panels of the 3rd course and within the hooks of the previous course and beneath the Slate Retaining Arm of the lock system, continue until reaching the other rake/gable end or valley of the third course. REMEMBER all rake slates WILL BE 2" LONGER (ie: in an application of 12X12's – all rake and valley slates will be 14X12's) and must be nailed.**

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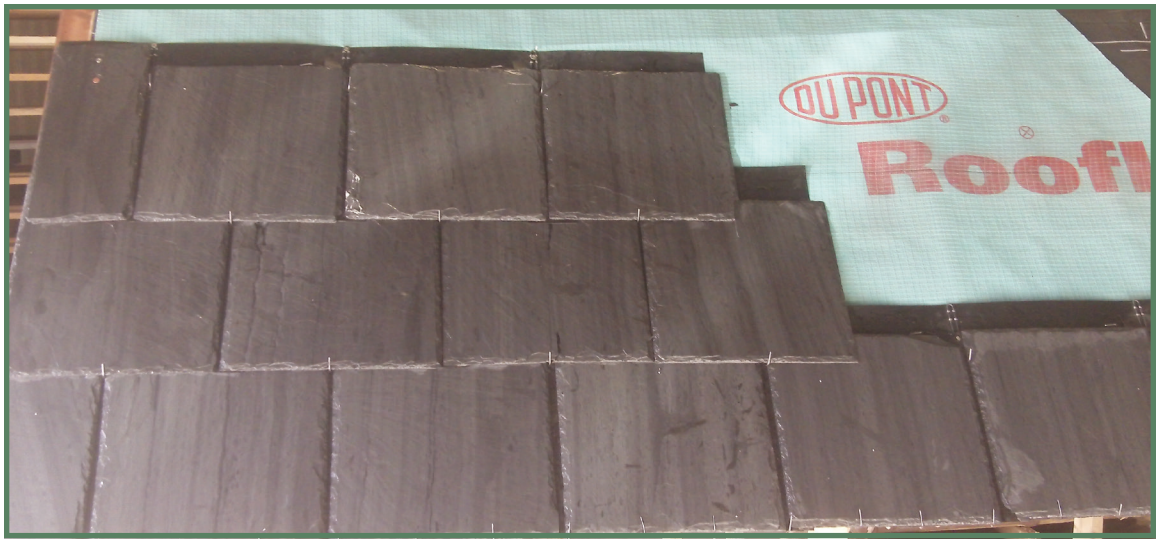
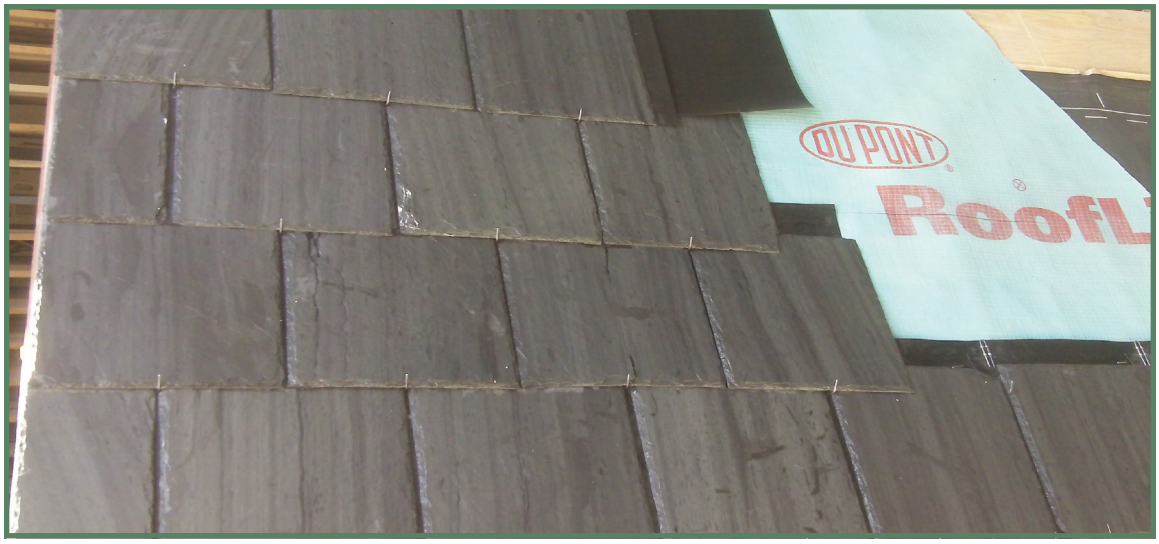


THIRD COURSE/ ROW OF SLATE SHIELD™ SLATES INSTALLED OVER PANEL IN HOOKS-

- **REPEAT the above instructions, alternating between full and half slates at the beginning of each course at the rake/gable end, until the ridge is reached.**



FOURTH COURSE/ ROW OF SLATE SHIELD™ SLATES INSTALLED OVER SLATE SHIELD™ PANEL (WITH EXTENDER STRIPS*) IN HOOKS .

*Please note, Extender Strips are so named as they have the purpose of extending the life of the installation by providing double coverage of the HDPE Weather Resistant material in areas potentially exposed to nature's weather conditions and additionally extending the useful width/coverage to provide for an extended 4" overlap of successive slate courses.

These products are protected by one or more of the following patents and/or additional patents pending:

US 8,677,710 B2
US 8,661,760 B2
US 8,661,761 B2

SLATE SHIELD™ LIGHT™ WEIGHT INSTALLATION PROCESS IS THE FINEST REAL SLATE LIGHT WEIGHT INSTALLATION METHOD AVAILABLE ANYWHERE. FOR MORE INFORMATIOM PLEASE CONTACT:

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