

Application Instructions for

HERITAGE® VINTAGE® LAMINATED ASPHALT SHINGLES

Phillipsburg, KS

THESE ARE THE MANUFACTURER'S APPLICATION INSTRUCTIONS FOR THE ROOFING CONDITIONS DESCRIBED. TAMKO BUILDING PRODUCTS, INC. ASSUMES NO RESPONSIBILITY FOR LEAKS OR OTHER ROOFING DEFECTS RESULTING FROM FAILURE TO FOLLOW THE MANUFACTURER'S INSTRUCTIONS. FAILURE TO FOLLOW THESE INSTRUCTIONS WILL ADVERSELY AFFECT COVERAGE UNDER THE LIMITED WARRANTY. SEE THE LIMITED WARRANTY FOR DETAILS.

THIS PRODUCT IS COVERED BY A LIMITED WARRANTY, THE TERMS OF WHICH ARE PRINTED ON THE WRAPPER.

IN COLD WEATHER (BELOW 40°F), CARE MUST BE TAKEN TO AVOID DAMAGE TO THE EDGES AND CORNERS OF THE SHINGLES.

IMPORTANT: It is not necessary to remove the plastic strip from the back of the shingles.

I. ROOF DECK

These shingles are for application to roof decks consisting of plywood or sheathing boards capable of receiving and retaining fasteners, and to inclines of not less than 2 in. per foot. For roofs having pitches 2 in. per foot to less than 4 in. per foot, refer to special instructions titled "Low Slope Application". For roofs having pitches greater than 21 in. per foot, refer to special instructions titled "Mansard or Steep Slope Fastening Pattern". Shingles must be applied properly. TAMKO assumes no responsibility for leaks or defects resulting from improper application, or failure to properly prepare the surface to be roofed over.

NEW ROOF DECK CONSTRUCTION: Roof deck must be smooth, dry and free from warped surfaces. It is recommended that metal drip edges be installed at eaves and rakes.

PLYWOOD: All plywood shall be exterior grade as defined by APA - The Engineered Wood Association. Plywood shall be a minimum of 3/8 in. thickness and applied in accordance with the recommendations of APA - The Engineered Wood Association.

SHEATHING BOARDS: Boards shall be well-seasoned tongue-and-groove boards and not over 6 in. nominal width. Boards shall be a 1 in. nominal minimum thickness. Boards shall be properly spaced and nailed.

TAMKO does not recommend re-roofing over an existing roof.

2. VENTILATION

Inadequate ventilation of attic spaces can cause accumulation of moisture in winter months and a build up of heat in the summer. These conditions can lead to:

- 1. Vapor Condensation
- 2. Buckling of shingles due to deck movement.
- 3. Rotting of wood members.
- 4. Premature failure of roof.

To insure adequate ventilation and circulation of air, the ventilation system must include inlets and outlets. This may be accomplished with a combination of ridge and soffit vents or by using gable end vents. FHA minimum property standards require one square foot of net free ventilation area to each 150 square feet of space to be vented. This may be reduced to one square foot of ventilation area per 300 square feet if at least 40% and not more than 50% of venting is provided not more than 3 feet below the ridge or if a Class I or II vapor barrier is installed on the warm in winter side of the ceiling in climate zones 6, 7, and 8 as recommended by the 2012 International Residential Code. For more information consult your design professional. If the ventilation openings are screened, the total area should be doubled.

IT IS PARTICULARLY IMPORTANT TO PROVIDE ADEQUATE VENTILATION.

3. FASTENERS

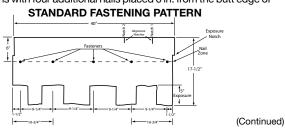
WIND CAUTION: Extreme wind velocities can damage these shingles after application when proper sealing of the shingles does not occur. This can especially be a problem if the shingles are applied in cooler months or in areas on the roof that do not receive direct sunlight. These conditions may impede the sealing of the adhesive strips on the shingles. The inability to seal down may be compounded by prolonged cold weather conditions and/or blowing dust. In these situations, hand sealing of the shingles is required. To insure quicker sealing, apply a quarter-sized dab of TAM-PRO® SBS Flashing Cement, TAMKO or TAM-PRO® Plastic Roof Cement, or TAMKO Tam-Seal Adhesive, meeting ASTM D 4586, Type 1, to the back of each tab. Place the adhesive a minimum of 1" (25 mm) from the side of the tab and 1" (25 mm) up from the bottom of each tab. Press shingle firmly into the adhesive. For maximum wind resistance along rakes, install any TAMKO starter shingle including sealant or cement shingles to the underlayment and each other in a 4" (102 mm) width of TAM-PRO® SBS Flashing Cement, TAMKO or TAM-PRO® Plastic Roof Cement, or TAMKO Tam-Seal Adhesive. Caution: Apply ONLY a thin uniform layer of adhesive less than 1/8" (3 mm) thick. Excessive amounts can cause blistering of the shingles and may soften the asphalt in certain underlayments resulting in the asphalt flowing, dripping and staining. Shingles must also be fastened according to the fastening instructions described below.

Correct placement of the fasteners is critical to the performance of the shingle. If the fasteners are not placed as shown in the diagram and described below, this will result in the termination of TAMKO's liabilities under the Limited Warranty. TAMKO will not be responsible for damage to shingles caused by winds in excess of the applicable miles per hour as stated in the Limited Warranty. See Limited Warranty on the wrapper or tamko.com for details.

FASTENING PATTERNS: Fasteners must be placed 6 in. from the top edge of the shingle located horizontally as follows:

1) Standard Fastening Pattern. (For use on decks with slopes 2 in. per foot to 21 in. per foot.) One fastener 1-1/2 in. from each end, one 10-3/4 in. from each end and one 20 in. from one end of the shingle for a total of 5 fasteners. (See Standard Fastening Pattern illustrated below).

2) Mansard or Steep Slope Fastening Pattern. (For use on decks with slopes greater than 21 in. per foot.) Use standard nailing instructions with four additional nails placed 6 in. from the butt edge of



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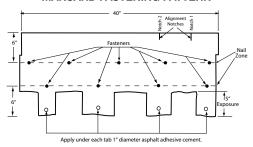




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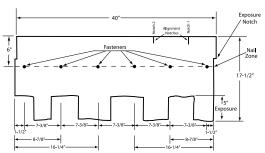
the shingle making certain nails are covered by the next (successive) course of shingles. Each shingle tab must be sealed underneath with TAM-PRO® SBS Flashing Cement, TAMKO or TAM-PRO® Plastic Roof Cement, or TAMKO Tam-Seal Adhesive immediately upon installation. Quarter-sized dabs of cement or adhesive must be applied to shingles with a 5 in. exposure, use 9 fasteners per shingle. (See Mansard Fastening Pattern illustrated below).

MANSARD FASTENING PATTERN

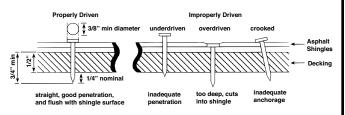


3) High Wind Warranty Fastening Pattern. (For High Wind Warranty Application requirements) One fastener 1-1/2" from each end. One fastener 8-7/8" from each end and one fastener 16-1/4" from each end for a total of six (6) fasteners per shingle. In addition to this shingle fastening pattern requirement for High Wind Application, TAMKO also requires the use of TAMKO starter shingles including sealant strip at eaves and rakes. Alternatively, along rakes, cement shingles to the underlayment and each other in a 4 in. (102 mm) width of TAM-PRO® SBS Flashing Cement, TAMKO or TAM-PRO® Plastic Roof Cement, or TAMKO Tam-Seal Adhesive. Caution: Apply ONLY a thin uniform layer of adhesive less than 1/8 in. (3mm) thick. Excessive amounts can cause blistering of the shingles and may soften the asphalt in certain underlayments resulting in the asphalt flowing, dripping and staining. High Wind Application is offered on new construction or complete tear-off applications only. It is not offered for recover applications. If High Wind Application requirements are not followed, the High Wind Application Warranty MPH, as stated on Table I in the Limited Warranty, reverts to the Standard Application Wind Warranty MPH limit. (See High Wind Fastening Pattern illustrated below.)

HIGH WIND WARRANTY FASTENING PATTERN



NAILS: TAMKO recommends the use of nails as the preferred method of application. Standard type roofing nails should be used. Nail shanks should be made of minimum 12 gauge wire, and a minimum head diameter of 3/8 in. Nails should be long enough to penetrate 3/4 in. into the roof deck. Where the deck is less than 3/4 in. thick, the nails should be long enough to penetrate completely through plywood decking and extend at least 1/8 in. through the roof deck. Drive nail head flush with the shingle surface.



4. UNDERLAYMENT

<u>UNDERLAYMENT:</u> An underlayment must be applied over the entire deck before the installation of TAMKO shingles. Failure to add underlayment can cause premature failure of the shingles which is not covered by TAMKO's Limited Warranty.

Products which are acceptable for use as underlayment are:

Asphalt Saturated Felt Underlayments:

- SuperX 30[™] Underlayment
- TAMKO No. 15 Asphalt Saturated Organic Felt
- Any TAMKO non-perforated asphalt saturated organic felt
- A non-perforated asphalt saturated organic felt which meets ASTM: D226, Type I or II or ASTM D4869

Specialty Underlayments:

- Tam-Shield® Synthetic Underlayment or Synthetic Shield Underlayment
- TAMKO TW Metal and Tile Underlayment, TW Underlayment and Moisture Guard Plus® (additional ventilation may be required. Contact TAMKO's Technical Services Department for more information.)
- A self-adhesive underlayment designed for use with asphalt shingles which meets ASTM D1970.

For Asphalt Saturated Felt Underlayments:

Apply the felt when the deck is dry. On roof decks with slopes 4 in. per foot and greater apply the felt parallel to the eaves lapping each course of the felt over the lower course at least 2 in. Where ends join, lap the felt 4 in. If left exposed, the felt may be adversely affected by moisture and weathering. Laying of the felt and the shingle application must be done together.

For All Other Specialty Underlayments:

On roof decks with slopes 4 in. per foot and greater apply the underlayment parallel to the eaves in accordance with underlayment written application instructions. The underlayment should not be left exposed for a longer period of time than is specified in the underlayments written application instructions. The final roof covering must be installed before the structure is exposed to adverse weather conditions, such as wind driven rain, high wind, hail, ice storms, etc.

In areas where ice builds up along the eaves or a back-up of water from frozen or clogged gutters is a potential problem, TAMKO's Moisture Guard Plus®, TW Metal and Tile Underlayment or TW Underlayment (or any specialty eaves flashing product) may be applied to eaves, rakes, ridges, valleys, around chimneys, skylights or dormers to help prevent water damage. Contact TAMKO's Technical Services Department for more information.

Substitute products as shingle underlayment should not be used.

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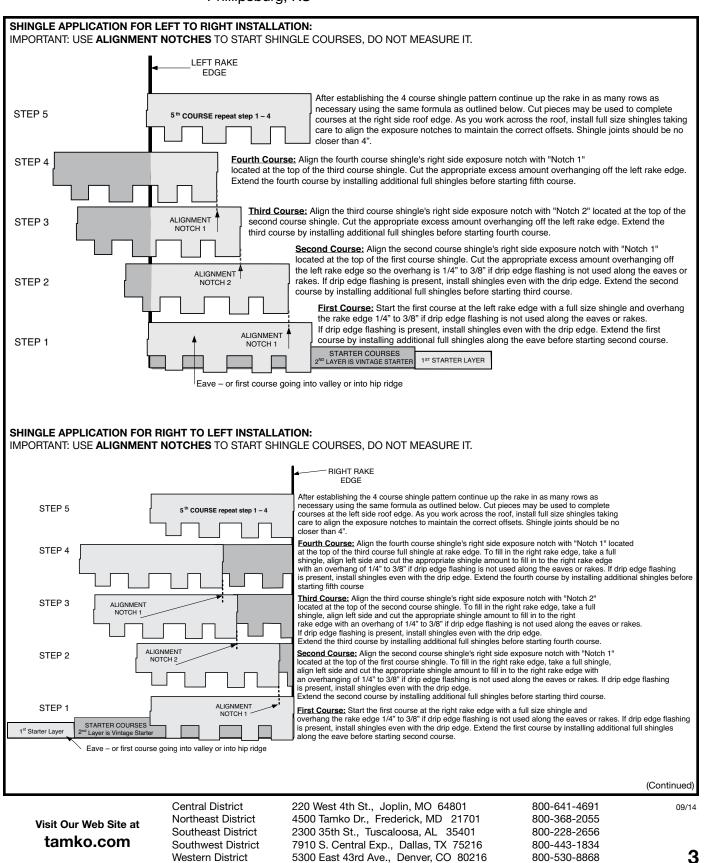
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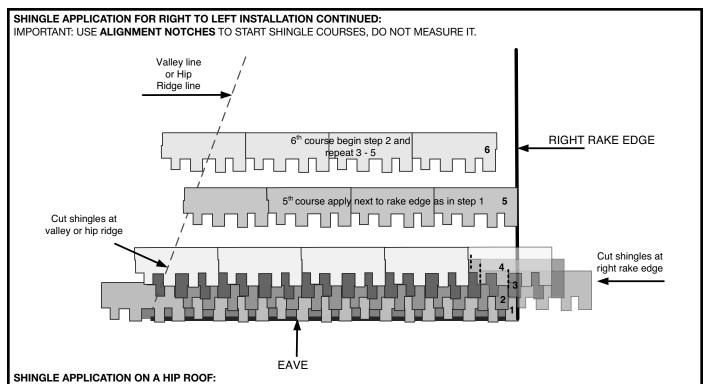
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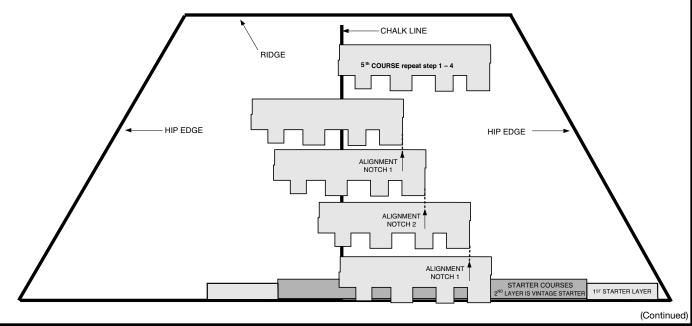


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IMPORTANT: USE ALIGNMENT NOTCHES TO START SHINGLE COURSES, DO NOT MEASURE IT.

For shingle application on a hip roof, strike a chalk line from the top point of the hip roof (at the ridge) down to the eave. This will be the reference line to shingle from, starting on the right side of the line using the left to right instructions. Fill in the left side of the chalk line applying shingles right to left. Install both sides of the chalk line as shingle courses go up the roof. As you work across the roof, install full size shingles taking care to align the exposure notches to maintain the correct offsets. Trim the last shingle in each course along the hip edge and finish with Heritage Vintage Hip and Ridge shingle products to complete the ridge. Refer to Hip and Ridge Fastening Detail in Section 8 to complete the ridge.



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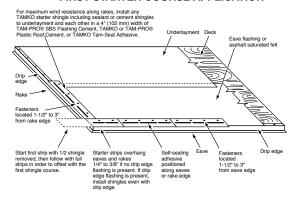
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5. APPLICATION INSTRUCTIONS

STARTER COURSE: Two starter course layers must be applied prior to application of Heritage Vintage Shingles.

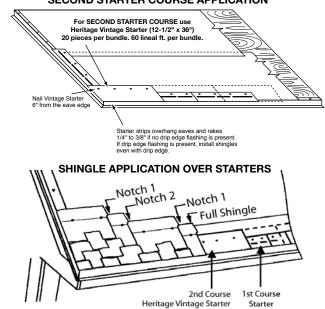
The first starter course may consist of TAMKO Shingle Starter, TAMKO 10-inch Starter or three tab self-sealing type shingles. If self-sealing three tab shingles are used, remove the exposed tab portion and install with the factory applied adhesive adjacent to the eaves. To offset the end joints of the Vintage Starter, remove 1/2 of the first starter shingle. Attach the first starter course with approved fasteners along a line parallel to and 1.5 in. to 3 in. above the eave edge. The starter course should overhang both the eave and rake edge 1/4 in. to 3/8 in. if drip edge flashing is not used along the eaves or rakes. If drip edge flashing is present, install shingles even with the drip edge.

FIRST STARTER COURSE APPLICATION



Over the first starter course at the eave edge, install Heritage Vintage Starter and begin at the left rake edge with a full size shingle and continue across the roof nailing the Heritage Vintage Starter along a line parallel to and 6 in. from the eave edge.

SECOND STARTER COURSE APPLICATION

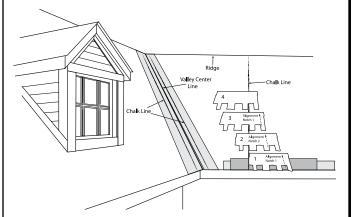


SHINGLE APPLICATION STARTING NEAR VALLEY:

IMPORTANT: USE **ALIGNMENT NOTCHES** TO START SHINGLE COURSES, DO NOT MEASURE IT.

Some roof layouts may not allow for application to begin at a rake edge, and may require you to begin shingle application near a valley. To begin shingle application starting near a valley, strike a chalk line from the top point of the ridge down to the eave on one side of the valley. This will be the reference line to shingle from, starting on the right side of the line using the left to right instructions. Fill in the left side of the chalk line applying shingles right to left. Install both sides of the chalk line as shingle courses go up the roof. Refer to Valley Application in Section 7 of these instructions to complete the valley. As shingles are applied toward the valley trim the last shingle trimmed to less than 12" in length to finish a course running into a valley. If necessary, trim the adjacent shingle in the course to allow a longer portion to be used.

SHINGLE APPLICATION STARTING AT VALLEY



6. LOW SLOPE APPLICATION

On pitches 2 in. per foot to 4 in. per foot cover the deck with two layers of underlayment. Begin by applying the underlayment in a 1/2-sheet width along the eaves and overhanging the rake edge by 1/4 to 3/4 in. if drip edge is not present. If drip edge is present, align shingle edge with drip edge flashing. Place a full-sheet width over the 1/2-sheet width starter piece, completely overlapping it. All succeeding courses will be positioned to overlap the preceding course by 1/2-sheet width. If winter temperatures average 25°F or less, thoroughly cement the laps of the entire underlayment to each other with TAM-PRO or TAMKO Plastic Roof Cement from eaves and rakes to a point of a least 24 in. inside the interior wall line of the building. As an alternative, TAMKO's Moisture Guard Plus®, TW Metal and Tile Underlayment, or TW Underlayment self-adhering underlayment may be used in lieu of the cemented felts.

7. VALLEY APPLICATION

TAMKO recommends an open valley construction with Heritage Vintage shingles.

To begin, center a sheet of TAMKO Moisture Guard Plus®, TW Underlayment or TW Metal & Tile Underlayment in the valley.

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After the underlayment has been secured, install the recommended corrosion resistant metal (26 gauge galvanized metal or an equivalent) in the valley. Secure the valley metal to the roof deck. Overlaps should be 12" and cemented.

Following valley metal application; a 9" to 12" wide strip of TAMKO Moisture Guard Plus®, TW Underlayment or TW Metal & Tile Underlayment should be applied along the edges of the metal valley flashing (max. 6" onto metal valley flashing) and on top of the valley underlayment. The valley will be completed with shingle application.

SHINGLE APPLICATION INSTRUCTIONS (OPEN VALLEY)

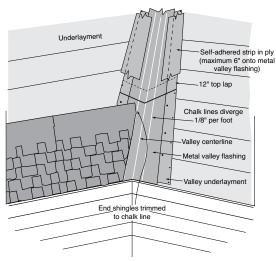
- Snap two chalk lines, one on each side of the valley centerline over the full length of the valley flashing. Locate the upper ends of the chalk lines 3" to either side of the valley centerline.
- The lower end should diverge from each other by 1/8" per foot. Thus, for an 8' long valley, the chalk lines should be 4" either side of the centerline at the eaves and for a 16' valley 5".

As shingles are applied toward the valley, trim the last shingle in each course to fit on the chalk line. Never use a shingle trimmed to less than 12" in length to finish a course running into a valley. If necessary, trim the adjacent shingle in the course to allow a longer portion to be used.

- Clip 1" from the upper corner of each shingle on a 45° angle to direct water into the valley and prevent it from penetrating between the courses.
- Form a tight seal by cementing the shingle to the valley lining with a 3" width of TAM-PRO or TAMKO Plastic Roof Cements (conforming to ASTM D 4586).

CAUTION: Adhesive must be applied in smooth, thin, even layers. Excessive use of adhesive will cause blistering to this product. TAMKO assumes no responsibility for blistering.

VINTAGE OPEN VALLEY DETAIL



8. HIP AND RIDGE FASTENING DETAIL

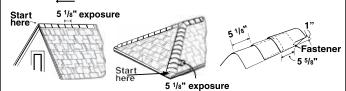
Apply the shingles with a 5-1/8 in. exposure beginning at the bottom of the hip or from the end of the ridge opposite the direction of the prevailing winds. Secure each shingle with one fastener on each side, 5-5/8 in. back from the exposed end and 1 in. up from the edge. TAMKO recommends the use of TAMKO Heritage Vintage Hip & Ridge shingle products.

Fasteners should be 1/4 in. longer than the ones used for shingles.

It is recommended that a 2-layer application of Vintage Hip and Ridge be applied to roof to enhance the overall appearance. When the second layer is applied, offset this layer by 1/4 in. to create a "shadow" effect.

IMPORTANT: PRIOR TO INSTALLATION, CARE NEEDS TO BE TAKEN TO PREVENT DAMAGE WHICH CAN OCCUR WHILE BENDING SHINGLE IN COLD WEATHER.

Direction of prevailing wind



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Information included in these application instructions was current at time of printing. To obtain a copy of the most current version of these application instructions, visit us online at tamko.com or call us at 800-641-4691.

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