

INSTALLER/OWNER RESPONSIBILITY

- 1) The installer assumes all responsibility for final inspection as to grade, manufacture and factory finish. This inspection of all flooring must be done before installation. Carefully examine flooring for color, finish and quality before installing it. The installer must use reasonable selectivity and hold out or cut off pieces with deficiencies, whatever the cause. If material is not acceptable, do not install it and contact the seller immediately.
- 2) Prior to installation of any hardwood-flooring product, the installer must determine that the job-site environment and the sub-surfaces involved meet or exceed all applicable standards. Recommendations of the construction and materials industries as well as local codes must be followed. These instructions recommend that the construction and sub floor be dry, stiff and flat. The manufacturer declines any responsibility for job failure resulting from or associated with sub-surface, sub flooring or job-site environmental deficiencies.
- 3) Use of stain, filler or putty stick for touch-up during installation should be accepted as normal procedure.
- 4) When flooring is ordered, 5% must be added to the actual square footage needed for cutting and grading allowance.
- 5) Should an individual piece be doubtful as to grade, manufacture or factory finish, the installer should not use the piece.

Aacer 3/4" Solid Strip & Plank Products Required Tools & Accessories Needed

NOTE: IT IS EXTREMELY IMPORTANT TO USE THE PROPER ADAPTERS AS WELL AS STAPLERS OR CLEATS. IMPROPER FASTENERS, MACHINES AND AIR PRESSURE CAN CAUSE SEVERE DAMAGE. THE MANUFACTURER OF THIS FLOORING PRODUCT IS NOT RESPONSIBLE FOR DAMAGE CAUSED BY USE OF IMPROPER TOOLS OR MISUSE.

- Broom
- Miscellaneous hand tools
- Flooring Nailer 2' Cleats
- Drill with 1/16" drill bit
- Tape Measure
- Hammer
- Chalk line & chalk
- Recommended Hardwood Flooring Cleaner
- Hand saw
- Nail set
- Table saw, jig saw, or circular saw
- 6-7d screw-shank nails
- Moisture meter (wood, concrete or both)
- 2" "Blind" fastening machine
- Undercut or Jamb Saw
- Ear plugs and safety glasses

Aacer 3/4" Solid Strip & Plank Products Installation Instructions

PRE – INSTALLATION PROCEDURES FOR JOB SITE INSPECTION

- 1) The building should be closed in with all outside doors and windows in place. All concrete, masonry, framing members, drywall, paint and other “wet” work should be thoroughly dry. The wall coverings should be in place and the painting completed except for the final coat on the base molding. When possible, delay installation of base molding until flooring installation is complete. Basements and crawl spaces must be dry and well ventilated.
- 2) All gutters and downspouts should be in place. Exterior grading should be complete with surface drainage.
- 3) Solid wood flooring must be installed on or above grade level. Do not install in full bathrooms.
- 4) Crawl spaces must be a minimum of 24” (600mm) from the ground to underside of joists. A ground cover of 6-8 mil black polyethylene film is essential as a vapor barrier with joints lapped six inches and taped. The crawl space should have perimeter venting equal to a minimum of 1.5% of the crawl space square footage. These vents should be properly located to foster cross ventilation. Where necessary, local regulations prevail.
- 5) Sub floor must be checked for moisture content using the appropriate testing method.
- 6) Permanent air conditioning and heating systems should be in place and operational. The installation site should have a consistent room temperature of 60-75 degrees F and humidity of 35-55% for 14 days prior, during and until occupied, to allow for proper acclimation.

STORAGE AND HANDLING

- 1) Solid wood flooring should be stored in the environment in which it is expected to perform. Deliver the materials to an environmentally controlled site. Materials should be allowed to acclimate for 72 hours or as long as necessary to meet minimum installation requirements for moisture content. Acclimation within a closed carton may not be adequate due to lack of air movement. Handle and unload with care. Store in dry place being sure to provide at least a four-inch air space under cartons, which are stored upon “on-grade” concrete floors. Flooring should not be delivered until the building has been closed in with windows and doors in place and until cement work, plastering and all other “wet” work is completed and dry. Concrete should be at least 60 days old.

Aacer 3/4" Solid Strip & Plank Products Installation Instructions (Cont.)

INSTALLATION APPLICATIONS

- 1) NOTE: MINOR OCCASIONAL NOISES IN MECHANICALLY FASTENED FLOORS IS NOT ABNORMAL DUE TO STRUCTURAL MOVEMENT CAUSED BY CHANGES IN ENVIRONMENTAL CONDITIONS. FOLLOWING THESE INSTRUCTIONS CAN MINIMIZE THESE FACTORS BUT OFFER NO GAURANTEE THAT THE FLOOR WILL NOT CREATE MINOR OCCASIONAL NOISES.

GENERAL INFORMATION FOR ALL FASTENING MACHINES

- 1) Avoid striking the edge of factory finished products with the fastener's mallet. Edge crushing can occur, causing unsightly cracks and splinters. Use a block to hammer against if necessary. Faceplates should be covered with protective materials to prevent damage to the surface of the flooring. Any water damaged, swollen or delaminated sub flooring materials will not hold fasteners properly and must be repaired or replaced.

GENERAL INFORMATION FOR MANUAL FASTENING MACHINES

- 1) Improper adapter plate selection can cause severe edge damage. Confirm that the proper adapter has been selected and properly installed for 3/4" flooring.

GENERAL INFORMATION FOR PNEUMATIC FASTING MACHINES

- 1) Improper pressure settings and failure to use proper adapters can cause severe damage to the flooring. The correct adapter and air pressure setting will properly set the fastener in the nail pocket. Low air pressures may fail to properly set the fastener and damage adjoining boards. Air pressures set too high may cause damage to the tongue, preventing installation of adjoining and cause blisters on the face of the flooring. Make certain that the compressor has a regulator in-line with the air hose for proper adjustment. Set pressure at 70 PSI to begin with and adjust until proper fastener setting occurs.

Aacer 3/4" Solid Strip & Plank Products Installation Instructions (Cont.)

SUBFLOOR REQUIREMENTS MUST BE

- 1) **CLEAN** – Scrape, broom clean, and smooth. Free of wax, paint, oil, sealers, adhesives, curing agents, and other debris.
- 2) **LEVEL/FLAT** – Within 1/8" in 10'. Sand high areas or joints. Flatten low spots with layers of 15# builders felt, plywood or shims (not leveling compounds).
 - **NOTE:** Laminated rosin paper or 15# builders felt (tarpaper) acts as a moisture retarder and may be used to reduce movement caused by changes in sub floor moisture, thereby reducing cupping and warping. (This is especially helpful over crawl spaces and basements). In addition, the use of these materials can give the flooring a more solid feeling, reduce sound transfer, prevent noise caused by minor irregularities and debris, and make it easier to slide the wood together across the surface of the sub floor.
- 3) **STRUCTURALLY SOUND** – Nail or screw any loose areas that squeak. Replace any water – damaged, swollen or delaminated sub flooring or underlayments. Avoid sub floors with excessive vertical movement.
- 4) **DRY** – Check moisture content of the sub floor with the appropriate moisture meter.

RECOMMENDED SUBFLOOR SURFACES

- 1) **PREFERRED:** 3/4" (19mm) CDX grade plywood plywood
- 2) Existing solid wood flooring
- 3) Screeds
- 4) T&G wood subflooring

SUBFLOOR TYPES

- 1) **NOTE:** Do not install solid wood plank or strip over radiant heated sub floors or attempt to glue to a sub floor of any type see [National Wood Flooring Association: For Members, NWFA Members](#).

Aacer 3/4" Solid Strip & Plank Products Installation Instructions (Cont.)

WOOD SUBFLOORS & WOOD STRUCTURAL PANEL SUBFLOORS

- 1) Plywood: Must be APA grade rated sheathing or CDX minimum.
- 2) **Do Not** install over particleboard, waferboard, pressed wood or fiberboard.
- 3) Make sure existing floor or sub floor is dry and well nailed or screwed down every 6" along each joist to avoid squeaking or popping before the floor is installed. The wood sub floor must not exceed 13% moisture content. Measure moisture content of both sub floor and wood flooring to determine proper moisture content with a reliable wood moisture meter. The difference between the moisture content of the wood sub floor and the wood flooring must not exceed 4%.
- 4) Optimum performance of hardwood floor covering products occurs when there is little horizontal or vertical movement of the sub floor. The **MINIMUM** sub floor recommendations described above are for 19.2" O/C joist spacing with minimum recommended spans. If the sub floor has excessive vertical movement (deflection) before installation of the flooring it is likely it will do so after installation of the flooring is complete. Deflection may cause the floor to become loose creating a noisy floor or cause premature finish wear. Avoid installations over sub floors that do not meet this minimum standard. As flooring manufacturers we are unable to evaluate each engineered system. Other spacing and spans as well as their engineering methods are the responsibility of the builder, engineer, architect or consumer who is better able to evaluate the expected result based on site related performance.
- 5) All underlayment panels should be spaced 1/8" apart to insure adequate expansion space or have the space cut around the perimeter using a circular saw. T&G panels normally have built in expansion; **DO NOT** cut around their perimeter. When installing over existing wood floors parallel with the flooring, it may be necessary to install an additional layer of plywood to stabilize the flooring or install the wood floor at right angles. Applicable standards and recommendations of the construction and materials industries must be met or exceeded.

Aacer 3/4" Solid Strip & Plank Products Installation Instructions (Cont.)

CONCRETE SLABS

- 1) Solid flooring can be installed over concrete once the appropriate nailing surface has been installed. The concrete must be of high compressive strength. All concrete sub floors should be tested for moisture content. Visual checks are not reliable. NOTE: Test several areas, especially near exterior walls and walls containing plumbing.
- 2) A 'DRY' SLAB, AS DEFINED BY THESE TESTS CAN BE WET AT OTHER TIMES OF THE YEAR. THESE TESTS DO NOT GUARANTEE A DRY SLAB. ALL CONCRETE SLABS SHOULD HAVE A MINIMUM OF 6 MIL POLY FILM MOISTURE BARRIER BETWEEN THE GROUND AND THE CONCRETE.

SUBFLOOR SYSTEMS ANCHORED

- 1) Install a suitable moisture retardant followed by a plywood sub floor with a minimum thickness of 3/4". Allow 1/2" expansion space around all vertical objects and 1/8" between all flooring panels. The panel must be properly attached to the sub floor using a minimum of one fastener per square foot and more if necessary. Use pneumatic or powder actuated fasteners. Do not hand nail the sub floor with concrete nails. Install a moisture retardant barrier with joints lapped 6" and begin installation of flooring using 1-1/2" fasteners.

FLOATING

- 1) Install a suitable moisture retardant followed by a plywood sub floor with a minimum of 3/8". Allow 3/4" expansion space around all vertical objects a 1/8" between all flooring panels. Install a second layer of 3/8" plywood at a right angle to the previous panels, offsetting the joints 2'. Staple together with staples that will not penetrate the first layer of sub floor with a crown width of 3/8" or more. Install a moisture retardant barrier with joints lapped 6" and begin installation of flooring.

GENERAL INSTALLATION TIPS

- 1) Floor should be installed from several cartons at the same time to ensure good color and shade mixture.
- 2) Be attentive to staggering the ends of boards at least 6", when possible, in adjacent rows. This will help ensure a more favorable overall appearance of the floor.

Aacer 3/4" Solid Strip & Plank Products Installation Instructions (Cont.)

- 3) Large spans in areas of high humidity may require the addition of internal or field expansion. This can be accomplished by using spacers. We recommend a .080 weed wacker line, every 10-20 rows inserted above the tongue and removed after several adjoining rows have been fastened.

STEP 1: DOORWAY AND WALL PREPARATION

- 1) Undercut door casings. Remove any existing base, shoe mold or doorway thresholds. These items can be replaced after installation. All door casings should be notched out or undercut to avoid difficult scribe cuts.

STEP 2: ESTABLISH A STARTING POINT – WALL –TO–WALL INSTALLATION

- 1) Installation parallel to the longest wall is recommended for best visual effects, however, the floor should be installed perpendicular to the flooring joists unless sub floor has been reinforced to reduce sub floor sagging. Find appropriate sub floor from “Sub floor Type” section in this instruction manual.
- 2) If a moisture retardant material is to be used, such as Laminated Rosin Paper (see NOTE, Sub floor Requirements), install this material before proceeding, lapping joints 6” and stapling if necessary.
- 3) Measure the width of the product being installed. For random or alternate width products, use the widest plank for the first row. Add 1” to allow for 3/4” expansion and the width of the tongue.
- 4) Using this measurement, in at least two places, measure out equal distance from the starting wall and 12” – 18” from the corners and snap a chalk line.

STEP 3: INSTALLING FIRST ROWS – WALL–TO–WALL INSTALLATION

- 1) NOTE: Always end glue wide width (4” or more) planks with PVA (Polyvinyl Acetate) wood glue.
- 2) Use the longest, straightest boards available for the first two rows. Align tongue of first row on chalk line. The groove should be facing the starting wall. Pre-drill the nail holes 1” from back (groove) edge, 1”-2” from each end, and at 6” intervals at a 45 degree angle down through the nailing “pocket” on top of the tongue.

Aacer 3/4" Solid Strip & Plank Products Installation Instructions (Cont.)

- 3) Face-nail the groove side where pre-drilled. When complete blind-nail at a 45 degree angle through the tongue of the first row. Fasten using 6 or 8d nails. Countersink nails to ensure flush engagement of groove. Avoid bruising the wood by using a nail set to drive the nails the last 1/2" into the tongue. Continue blind nailing using this method with following rows until or nailer can be used.
- 4) End-joints of adjacent rows should be staggered a minimum of 6" to ensure a more favorable overall appearance.
- 5) Beginning rows may be blind-nailed where clearance allows using a pneumatic finish nailer with 15 gauge, 1-3/4" (minimum) nails in lieu of above.

STEP 2 & 3: CENTER TO WALL INSTALLATION

- 1) Snap a chalk line down the center of the room.
- 2) Install a sacrificial row that extends the entire length of the room on the centerline.
- 3) Install three rows of flooring.
- 4) Remove the sacrificial row and insert a slip tongue (spline) in the open groove. Always glue and nail the slip tongue in place.

STEP 4: RACKING THE FLOOR

- 1) Rack materials to cover approximately 2/3 of the room. Begin racking approximately 6" from the edge of the previously installed rows. Avoid pulling boards too tightly together on the sides, as they must move freely when fastening begins.
- 2) Mark the final board in each row and cut to proper length allowing for expansion. Visually inspect flooring, setting aside boards that need to have natural character flaws cut out. Use these boards for starting and finishing row after objectionable characteristics have been removed.

STEP 5: INSTALLING THE FLOOR

- 1) Fasten a sacrificial board to the floor. Check for surface damage, air pressure setting, tongue damage, etc. before proceeding. Make all adjustments and corrections before installation begins. Once proper adjustments have been made, remove and destroy the board.

Aacer 3/4" Solid Strip & Plank Products Installation Instructions (Cont.)

- 2) Begin installation with several rows at a time, fastening each board with at least two fasteners, 8-10" apart and 2-3" from the ends (to avoid splitting). Tighten boards as necessary to reduce gaps before fastening.
- 3) End-joints of adjacent rows should be staggered 6" when possible to ensure a more favorable overall appearance.
- 4) The last 1-2 rows will need to be face-nailed where clearance does not permit blind nailing with a Brad nailer. Pre-drill and face-nail on the tongue side following the nailing pattern used for the first row.
- 5) Rip final row to fit and face-nail. If the final row is less than 1" in width, it should first be glued to the previous UNINSTALLED row and the two joined units should be face-nailed as one.

STEP 6: COMPLETE THE JOB

- 1) Clean the floor with the recommended wood flooring cleaner by Aacer Flooring.
- 2) Re-install any transition pieces that may be needed, such as Reducer Strips, T-moldings, or Thresholds. These products are available pre-finished to blend with your flooring.
- 3) Re-install all wall base and/or quarter round moldings. Nailing into the wall, not the floor.
- 4) Leave warranty and floor care information with the owner. This information is available on the web at [Residential Flooring | Aacer Flooring, LLC](#).
- 5) To prevent surface damage avoid rolling heavy appliances or furniture on the floor. Use plywood, hardboard or appliance lifts if necessary.

Aacer 3/4" Solid Strip & Plank Products Installation Instructions (Cont.)

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Limited Residential Warranty Program

The limited warranties set forth below apply only to prefinished products and are only effective with purchases made after January 1, 2005.

FINISH WARRANTY

Aacer Flooring warrants that the factory finish will not wear through or separate from the wood for 20 years or as long as the original purchaser owns the home, whichever is less.

MATERIAL WARRANTY

Aacer Flooring warrants that the products have been manufactured in compliance with the grading rules of Aacer Flooring, and will be free from manufacturing defects, which are limited to improper milling or improper drying only. Manufacturing defects do not include natural wood characteristics such as mineral streaks, knots, grain variations, and normal minor differences between color samples and the color of installed floors. These are normal characteristics and are not defects.

EXCLUSIONS AND LIMITATIONS

- ◆ These warranties do not cover damage, indentations, scratches, or stains arising from negligence, accidents, abuse, fire or excessive heat, abnormal wear, spike heels, grit, sand or other abrasives, dents or insect infestation after the product has left our factory or any condition caused by domestic pets.
- ◆ Aacer floors should be installed in environments of 35% to 55% relative humidity to prevent possible damage not covered by warranty. Installation of a humidifier or dehumidifier may be necessary. The Aacer floor is designed to perform in an environmentally controlled structure.
- ◆ The sole obligation and liability of Aacer Flooring under our limited warranties is to repair, replace, or refinish the floor, in part or in whole, at no cost to the original purchaser or to issue a refund of the purchase price, at Aacer Flooring's discretion. Only Aacer floors that were professionally installed will be eligible for labor cost reimbursement. If you installed the floor yourself, Aacer will cover the cost of replacement materials only.
- ◆ No warranty coverage is provided for flooring that contains obvious defects of any kind that were discovered or discoverable with reasonable effort by you or your contractor and installed nonetheless. If before installation you discover any flooring that has obvious defects, please contact Aacer Flooring or distribution immediately, and replacement flooring will be provided at no cost.

Aacer 3/4" Solid Strip & Plank Products Installation Instructions (Cont.)

- ◆ The limited warranties do not cover color changes to any flooring, which results from exposure to UV light. Normal exposure to sunlight will cause changes in the shading of any wood floor and this is not considered a defect. Area rugs should be removed occasionally, as they block sunlight and may give the appearance of discoloration under the rug.
- ◆ These warranties do not cover damage or unsatisfactory performance caused by excessive moisture including, but not limited to, improper humidity inside the home, excessive ground moisture that migrates into the home for any reason, water leaks caused by broken pipes or appliances, weather conditions or any other natural disasters such as flooding or excessive rainfall.
- ◆ Gloss reduction is not considered wear-through. Therefore, it is not covered under the finish warranty.
- ◆ *Since wood is a natural product, it will tend to expand and contract as moisture and humidity levels inside the home may change. Accordingly, normal expansion and contraction, which results in minor separations between flooring boards are not covered by these warranties.*
- ◆ *These warranties exclude and will not pay consequential or incidental damages associated with any warranty claim. Repair, refinish, or replacement (or a refund of your purchase price) of flooring material are the sole remedies.*
- ◆ *All warranties are limited to the original purchaser only and the warranties herein are not assignable or transferable to any other party.*
- ◆ *Aacer shall be given reasonable opportunity to investigate any warranty claim and no materials shall be returned to Aacer or destroyed until after inspection and approval by Aacer.*

THERE ARE NO WARRANTIES, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF, OR AS OTHERWISE SET FORTH HEREIN. NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE ARE MADE, INCLUDING BUT NOT LIMITED TO, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. UNDER NO CIRCUMSTANCES SHALL AACER FLOORING BE LIABLE FOR ANY LOSS OR DAMAGE ARISING FROM THE PURCHASE, USE, OR INABILITY TO USE THIS PRODUCT, FOR ANY SPECIAL INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE. YOUR RIGHTS AND THE LIMITATIONS DESCRIBED ABOVE VARY FROM STATE TO STATE. THUS IT IS IMPORTANT TO RETAIN THIS WARRANTY INFORMATION. NO INSTALLER, RETAILER, DISTRIBUTOR, AGENT, OR EMPLOYEE OF AACER FLOORING HAS THE AUTHORITY TO INCREASE OR ALTER THE OBLIGATIONS OR LIMITATIONS OF THIS WARRANTY.

Revised 09/05/12