



Vintage Installation Information

This Installation guide for all Vintage Product lines.

General Installation Instructions for all products

Ensure the site environmental conditions are suitable for installation and take record. This includes: Relative humidity, subfloors or concrete moisture readings, condition of product to be laid, sources of water or humidity extremes. Do not continue the installation, if any of the conditions in this direction/warranty guide are not met and do not generally comply with NWFA instructions.

Ensure all other trade activities are completed as they may impact the quality of the installed flooring. Wood flooring is one of the last products to be installed at a construction site. Window, door, drywalling, painting and HVAC activation (on for >7 days) must be completed and dry before installation begins. This is to avoid humidity extremes and damages that void the warranty.

Acclimatize the product according to the product directions (Most Vintage products are designed to perform better without acclimatization). See more information below.

Ensure the subfloor is perfectly level (1/8" per 8'). Level high spots and fill low spots as required. Ensure the subfloor is firmly anchored ensuring no movement, flex or squeaking.

Ensure the subfloor is less than 12% MC and record readings, subfloor must be within 4% of the actual floor being installed.

Thoroughly sweep and vacuum the area where the flooring is to be installed.

Prepare installation along longest straightest wall first using long pieces for the starting row and across (perpendicular to) floor joist. In some applications, installing parallel to floor joist may be required for aesthetic reasons. Consult your Dealer, Installer and Developer for their recommendations and building code requirements.

Open and select products from a minimum of 5 boxes to ensure an appropriate mix of lengths, wood character and color.

Inspect each piece before installation. Do not install any defective piece or piece that has a color, character or grain etc. that may not suit the look of the floor and may be displeasing to the consumer. These pieces can be cut and used for starters, installed in a less conspicuous location (E.g. closet, under cabinets etc.) or discarded. If you choose not to install these pieces, please note they are not covered by Vintage's warranty.

Installing over a crawl space: Installation may occur over a crawl space providing care has been taken to cover all areas of exposed earth with a 6mm C.G.S.B polyethylene. Also ensure that sufficient cross ventilation exists so that no moisture will accumulate and be absorbed in the wood flooring. Follow local building codes.

Preparation of Plywood & Concrete subfloors

Vintage Hardwood Flooring recommends that all Vintage Hardwood Flooring be installed with a minimum of 5/8" (15.8750 mm) A.P.A. approved, C.S.P/D.F.P. stamped plywood, or 3/4" O.S.B. Underlayment grade PS2-92 rated, or concrete slab. The use of particleboard as a subfloor will automatically void the warranty. Consult your Authorized Vintage Dealer for recommendations on your specific subfloor application. Any failure of Vintage Hardwood Flooring relating to improper subfloors, or subfloor preparation is not the responsibility of Vintage Hardwood Flooring, and will not be covered under warranty. Sweep and vacuum subfloor. Ensure that old carpets, oils, foreign particles, protruding nails, carpet glues, etc., are removed prior to installation. For wood subfloors, make sure they are level, clean, dry and securely fastened. Repair and/or replace any section that is rotted or damaged. Always follow local building codes. Refer to Chart #1.

Do not install Vintage's Pioneered® Solid hardwood flooring over concrete unless an acceptable plywood subfloor and vapor barrier is firmly anchored over sleepers and a dehumidifier is in place to continuously remove excess humidity from the room.

Moisture Content

Acceptable subfloors & ground level installations

Chart #1

| Pioneered® Solid | Plywood, OSB | At or above ground level only | Nail |
|----------------------|--------------------------|---------------------------------|---------------------|
| Northern Solid Sawn® | Plywood, OSB or Concrete | At, above or below ground level | Nail, glue or float |
| Solid Sawn® | Plywood, OSB or Concrete | At, above or below ground level | Nail, glue or float |
| U-LOC® | Plywood, OSB or Concrete | At, above or below ground level | Float |
| Crafted® | Plywood, OSB or Concrete | At, above or below ground level | Nail, glue |

Plywood: The maximum moisture content (MC) for plywood should never exceed 12%
Concrete: The maximum moisture content for concrete should never exceed 12%
The difference between the flooring and the subfloor should never exceed 4%

Tools & Accessories - For all types of Installations

Table saw, miter saw, measuring tape, nail set, hammer, tapping block, nail gun (manual or pneumatic), square, chalk line, putty fill, broom, dustpan and Vintage Cleaning Kits. Always consult the dealer you purchased your flooring from for appropriate installation tools.

Tools & Accessories - Nail Down

15 lb felt or equivalent, nail gun or staple gun (manual or pneumatic), square, chalk line, putty fill, broom, dustpan and Vintage Cleaning Kits. See Chart #4 for nail gun & cleat recommendations.

Tools & Accessories - Glue Down

Trowel, cleaning solvent and moisture cured glue – See glue down installation instructions.

NOTE: It is extremely important that the proper trowel is used to ensure maximum coverage and produce a good bond between subfloor and flooring. A 100-150 pound roller may also be required.

Tool & Accessories - Floating Floors

Vintage T & G glue, Vintage's Premium Underpad, mineral solvents (for cleaning glue), and shims.

Material Acclimatization

Pioneered® Solid:

Open boxes fully (never just the ends) and allow the wood to acclimate to the ambient temperature of the room. The wood must be given 48-72 hours at approx. 23° C (72°F) and a relative humidity of 40% before installation. Special note: In some instances you may not be able to acclimate flooring. When the relative humidity is too high or too low (above 50 % and below 40 % RH), acclimating may not be suitable. Always consult a hardwood flooring dealer or installer to ensure the homes specific conditions are accounted for before acclimatization. Expansions and contraction caused by acclimating is not covered under this warranty.

Crafted®, Solid Sawn®, Northern Solid Sawn® & U-LOC®: Do not acclimate. Flooring must be immediately upon opening the boxes.

Additional Allowance Recommendations

This will cover cutting waste and defects. It is the installer's and owner's responsibility that all pieces be inspected, and graded prior to installation. If any piece does not meet installer/owner's personal standard, do not install these pieces. If pieces are not chosen to be installed because of appearance, length of piece, or personal visual standards, this will not be considered part of the percentage defect allowance. It is also recommended to have additional materials kept in case of future repairs.

Defect allowance: 2 1/4" - 4 3/8" widths 5% additional
5" - 10" widths 8% additional

Important Note

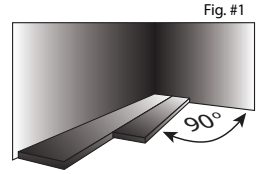
FOR ALL INSTALLATIONS - ALWAYS WORK FROM 5-6 DIFFERENT BOXES AT ONE TIME

The installer is the final grader. Installer/homeowner will take full responsibility for all flooring that is installed, even if the primary owner of the residence is absent at the time of installation. If unsure of any requirements, please consult a Vintage dealer prior to installation. Although Vintage Hardwood Flooring takes every precaution to ensure that Vintage's hardwood flooring is graded and shipped to industry standards, we suggest inspection of each piece of Vintage hardwood flooring before installation. Boards that may not like the look of, or contain a mark that may affect the look of the floor should be used as cut pieces for start/end pieces. These pieces could also be used in less conspicuous areas such as in closets or under couches and sofa's etc.

Nailed Down Application

See Chart #4 for nail gun and cleat recommendations

Step #1 - Mark your starting line using a chalk line, draw a guide line out from the starting wall by measuring out the width of one board plus and expansion gap. (see Chart #2). This line is where your first strip of flooring is installed, and also allows for the expansion gap. It is very important for the starting line to be straight and square (see Fig. #1).



Step #2 - Install the strips

Face nail or glue using a moisture cured adhesive (best practice) on the first row of strips with the grooved side facing the wall; put the nails as close to the wall as possible. This way, the quarter round will cover the nail heads. Face nailing for the first few rows before there is enough room to use the nail/staple gun. It must be nailed/stapled down or glued by hand rather than with the hardwood floor-nailing machine because of the vertical wall obstruction. When clearance allows, start using the hardwood floor nail/staple gun. Nails/staples should be spaced a minimum 2"-3" (57-76mm) from both ends of the boards, and for all other nails/staples, see Chart #3. Measure and cut the strip to the required length to finish the first row. The remaining section should be used to start the second row, in order to minimize cut waste. The strip selection for completing the first row must be long enough to yield a remaining section of adequate length. Leave the required expansion gap (Chart #2) between the wall and the end of each strip in each row. The subsequent rows must be installed in the same manner. Don't be afraid to waste a few strips in order to adjust and test the nailing machine. See Hardwood Floor Nailing Tips. When the last few rows are reached, completion of these rows with the nail/staple gun may not be attainable, due to vertical obstructions. Toe nail, face nail, or glue the last remaining rows.

NOTE: The last strips along the wall may need to be ripped in order for them to fit properly. Don't forget to leave the minimum space for expansion (Chart #2).

Installation - Expansion Gap allowances

Chart #2

| | |
|---------------------------|--|
| Pioneered® 3/4" | Leave 3/4" around entire room |
| Solid Sawn® 3/4" | Leave 3/4" around entire room |
| Northern Solid Sawn® 3/4" | Leave 3/4" around entire room |
| Crafted® 1/2" | Leave 1/4" around entire room |
| U-LOC® 7/16" | For rooms up to 26' x 52' - Leave 1/2" (13 mm) |
| | For rooms up to 33' x 66' - Leave 5/8" (16 mm) |
| | For rooms up to 39' x 79' - Leave 3/4" (19 mm) |

Note: For rooms larger than 39' x 79' - install a transition such as a t-mold at 39' and 79' to allow for expansion.
For floating floors a 3/4" expansion gap must be left up against all vertical obstructions

Wood Displacement (Dimples on Surface)

Hardwood flooring, dense smooth woods in particular, may show dimpling on the surface from the displacement of wood by the fastener. Vintage flooring products should not dimple providing the procedures are followed. Therefore, dimpling is not covered under Vintage's warranty. It is the responsibility of the installer to monitor and take immediate action if dimpling occurs. (i.e adjusting air pressure, using smaller cleats, adjust/repair nail driver pin, adjust nailer shoe angle etc).

Nailing Pattern/Schedule

Chart #3

| | Ends of the boards | Along the board |
|-------------------------|--------------------|-----------------|
| Pioneered® | 2"-3" | 6"-8" |
| Solid Sawn® (3 1/4"-4") | 2"-3" | 6"-8" |
| Solid Sawn® (5"-10") | 2"-3" | 4"-6" |
| Northern Solid Sawn® | 2"-3" | 4"-6" |
| Crafted® | 2"-3" | 4"-6" |

Must have a fastener (nail or staple) between 2 - 3" on the ends of each board

Hardwood flooring Nail gun & fastener recommendations

Chart #4

| | |
|----------------------|--|
| Pioneered® Solid | Cleats: 15.5 to 18 ga Minimum 1 3/4" |
| | Staples: 15.5 to 17 ga Minimum 1 3/4" |
| Solid Sawn® | Cleats: 18 ga Minimum 1 1/2" |
| Northern Solid Sawn® | Cleats & Staples: 16 to 18 ga Minimum 1 1/2" |
| Crafted® | Cleats: 18 to 20 ga Minimum 1 1/4" |
| | Staples: 18 to 19 ga Minimum 1 1/4" |

Recommendation based on the approved subfloors. Anything outside of this guideline, contact a Vintage dealer.

Hardwood Floor Nailing Tips

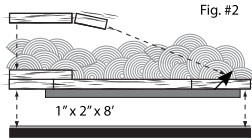
Here are a few tips to make the job easier; if nail down installation is chosen.

1. Prevent any scratches and indentations on the surface of the board by keeping the nailer plate (base) clean, free from nicks and scratches at all times. Also by putting down the nailer/stapler on the plywood or on a piece of cardboard, not directly on the prefinished floor.
2. Make sure the nailer/stapler base is squared and sits well on the edge of the strip to ensure the nails/staples are secured into the nailing channel at the proper angle to prevent dimpling and damaging the edges of the strips.
3. Verify regularly the hardwood floor nailer/stapler is in working condition to prevent damages to the strips.
4. Start the second row and subsequent rows with a strip of at least 6" (150 mm) longer or shorter than the strip used in the previous row. This will eliminate unsightly step effects. The remainder of the floor should follow this rule to ensure an aesthetically pleasing floor.

Pneumatic nailer: Air pressure should be adjusted adequately for each species of hardwood floor being installed and checked regularly (always test before using) so that the cleats are seated properly in the nailing channel to avoid dimpling. *Great attention to detail during fabrication on the part of Vintage Hardwood Flooring team ensures exceptional QUALITY in the finished product. Longevity of hardwood floors is directly related to proper installation and lifetime commitment to appropriate care and maintenance.

Glue Down Installation Instructions

Step #1 – Mark the starting line: Vintage Flooring recommends that the hardwood flooring be installed parallel to the longest, straightest wall in the room. Start by measuring out from the wall 10 boards wide. Example: for 3.25" Northern Solid Sawn® flooring, $10 \times 3.25" = 32.50"$, plus the expansion gap of $\frac{3}{4}"$ which totals $33.25"$ from the wall. (See Chart #2 for expansion gap widths for all products). Using a chalk line draw a guideline parallel to the wall based on the above measurements. This will eliminate any ripping of material at the end of the job for the last row. Using the straightest pieces of 1"x2"x8' length of wood and 2-inch concrete nails or screws, fasten the strips to the concrete. The first row of starter boards will butt against the concrete. This ensures the strips are in line with the chalk line because this will determine how straight the floor will be.



Note: If cutting a piece that has not been set aside for cutting, make sure it is long enough to yield the next row's starting piece. Leave the expansion gap (See Chart #2) between the wall and the end of each strip in each row. See Fig #2.

Step #2 – Spread the adhesive

NOTE: Vintage Hardwood Flooring: only recommends installations when a moisture-cured polymer glue is used. Follow directions of glue manufacturer. Do not use latex/water based glues. Apply the recommended adhesive with a trowel according to the manufacturer's installation instructions (found on adhesive pail) for the specific adhesive that is being used.

SPECIAL NOTE: Open time and installation on adhesives vary from manufacturer to manufacturer, ensure to read instructions carefully before starting. Open times can also be affected depending on the temperature and humidity.

Moisture Cured Adhesive Recommendations

For all glue down installations of Crafted®, Solid Sawn® or Northern Solid Sawn®, the installer must use Urethane based polymer adhesives. Vintage does not warranty the adhesive, check adhesive manufacturers warranty information.

Step #3 – Install the strips

Inspect each piece of Vintage Hardwood Flooring before installation. Start with the first piece with the tongue facing the area that will be completed last. Line up the tongue of the boards against the holding strip, and then press the board into the adhesive. Working from left to right, lay the next board and continue working towards the right, until the wall is reached and requires a cut piece. Choose one of the pieces set aside for cutting and cut the desired length. Note: if cutting a piece that has not been set aside for cutting, ensure it is long enough to yield the next row's starting piece. Leave the expansion gap between the wall and the end of each strip in each row. Start the second row with a strip of at least 6" (150mm) longer or shorter than the strip used in the first row. This will eliminate unsightly step effects. The remainder of the floor should follow this rule to ensure an aesthetically clean looking floor. Minimize adhesive from getting into the tongue or groove; otherwise, the strips of the flooring may not fit tightly. If adhesive gets on the finished side the strips, clean immediately with appropriate cleaning products, recommended by the adhesive manufacturer.

Flooring may require slight tapping in order to ensure a tight fit. 3M's blue tape may be used (if required), to hold pieces together until glue bond has developed. If a roller is required to obtain maximum adhesion, wrap a foam sheet around it to minimize any damage to the surface of the floor. When the end of the wall is reached, a pry bar may be required to get the pieces tight. Use shims where required until the glue has dried.

Glued Down Installation for Herringbone

For a successful herringbone floor installation, accurate measurements are critical. Floor boards are manufactured using the metric system and installation will be much more precise if measurements are taken accordingly.

Step #1 - Determine pattern direction Fig. #3

Consider the following when determining how to install herringbone flooring:
Longest direction of the room and the home's features such as hallways, fireplace, windows and doors.

Step #2 - Installation guide lines

Using a chalk line, trace guide line **A** in centre of room to determine centre of pattern. On each side of centreline, trace two lines **B** & **C**, $17/32"$ (30.8mm) apart from the centreline for $3\ 1/4"$ (84 mm) and $1\ 53/64"$ (46.5 mm) for 5" width. These will be used as guide lines for top corners of strips. Trace additional parallel guide lines **D** across floor surface for installation of subsequent rows. Using various colors of chalk will help with installation.

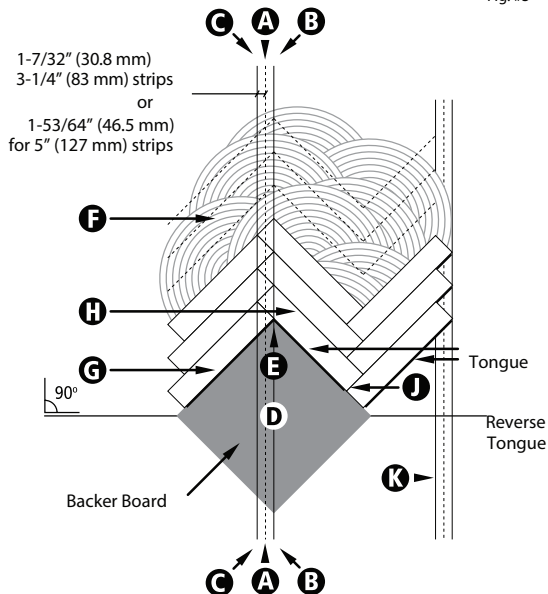
Step #3 - Backer board

Use a piece of plywood to make backer board **E** that will come in very handy to start first row of strips. Cut a perfect square whose sides are 2" longer than the floor strips. Tapcon or nail into concrete/plywood. $3\ 1/4"$ (84mm) x $14.68"$ (373 mm) boards = $17"$ (432 mm) x $17"$ backer board
 $5"$ (127 mm) x $30"$ (762 mm) boards = $32"$ (813 mm) x $32"$ backer board
Begin installation in centre of room, aligning one corner **F** of backer board with guideline **A** and securing it to the subfloor. Place one strip of herringbone on each side of backer boards to ensure measurement accuracy, then remove.

Step #4 - Adhesive application

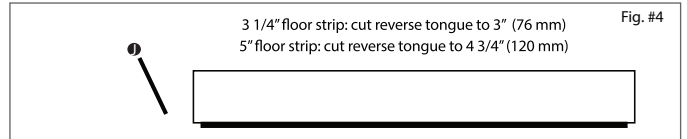
For optimal adhesive application, **G** work trowl in circular motion at 45° angle; adhesive left on floor by trowel teeth is just the right amount. Only cover surfaces that can be reasonably laid in 2 hours (maximum 5 rows), since adhesive may dry too quickly and not stick properly. Reaction time may vary from one adhesive to another and may also be affected by room temperature and relative humidity (see manufacturer's specs on container).

Fig. #3



Step #5 - Strip laying

It is very important that installation be started straight and square. Cut many pieces of reverse tongue into either $3"$ for $3\ 1/4"$ flooring or $4\ 3/4"$ for 5" flooring and put aside for throughout the install. Place one reverse tongue into a piece of flooring (Fig #3 & 4).



Install first strip **A**, aligning right corner with guideline **B** and left corner with guideline **C**, placing tongue side against backer board and pressing strip down into adhesive. For plywood installation, first row must be manually nailed down for accurate installation. Install second strip **D** pressing strip against first-laid strip, placing tongue side against backer boards and pressing strip down into adhesive end against first-laid strip, placing tongue side against backer boards and pressing strip down into adhesive. Proceed the same way for subsequent strips until ready to cut last strip of row. If not previously done, trace three more guide lines **E** for installation of next row.

Before installing second row, insert reversing tongues **F** into strip end grooves. Install subsequent rows the same way as the first one. Refer to installation gap Chart #2. Check installation alignment every 4 or 5 rows to ensure square installation. A few millimeters of error can become catastrophic, getting worse row after row.

Floating Floor Installation Instructions

Sweep and vacuum the subfloor before laying any material. Make sure that any high points in the subfloor are removed, cleaned and sanded and any low points are filled with leveling compound.

Vintage's Premium Underpad Installation

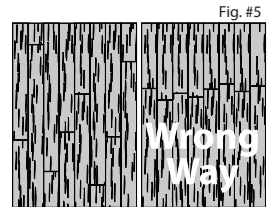
For installations of Vintage Solid Sawn®, Northern Solid Sawn® or U-LOC®

Step #1 - After the subfloor has been cleaned, roll out Vintage's premium acoustic underpad. Unroll the underpad with the film coated (shiny side) facing down against the subfloor. Cut the underlayment about 2" longer than the room length. Butt the edge of the first sheet, (the edge without they overlapping film), along wall and trim to fit adjacent walls. Bring the edge of the adjoining sheet to the first sheet so that the edges of the foam meet and the overlapping film underlies the second sheet. Secure the edges of the foam together with tape strips. Repeat this procedure until the entire room is covered; Vintage recommends running 2" of underlay up the sides of the walls. This excess will be covered by the baseboards. It will prevent excess moisture from the concrete migrating to the floor and assist with noise absorption.

Solid Sawn® & Northern Solid Sawn® Products

Step #2 - Laying the wood floor

Using the longest pieces available, lay the first row against the longest and straightest wall. Carefully apply glue into top of groove along the whole length of the piece, using Vintage's T & G glue (available at your Authorized Vintage Dealer) specially designed for Vintage's hardwood flooring. Lay the first piece with the grooved edge against the wall. If the wall is not square, use wedges/shims between the flooring strips and the wall to achieve the desired expansion gap. Start the second row with a strip of at least 6" (150mm) longer or shorter than the strip used in the first row. This will eliminate unsightly step effects. Fig. #5 The remainder of the floor should follow this rule to ensure an aesthetically pleasing floor. Clean any glue that gets on the finished side of the flooring before the glue dries. Flooring pieces may require slight tapping in order to ensure a tightfit. 3M's blue tape may be used, if required, to hold pieces together until glue bond has fully developed. Rip the strips for the last row to the required width, not forgetting to allow for expansion. Use a crow bar to ensure tight fitting boards, use shims to hold in place until glue has dried. Remove the shims 24 hours after installation.



U-LOC® Installation

Step #2 - Laying the wood flooring

Insert the tongue at the side of the board into the groove at 45° angle. Use both hands to apply equal pressure to the board. Line up the far left side of the board to be positioned with the end of the previous board installed. Lightly press the board down to lock in place. Never force boards and remove debris that could get in the way of the locking system. For aesthetical reasons, on starting the next row, always make sure to stagger the end joints by at least 6" (15.24 cm). Try to use cut piece from previous row to start new row. Vintage's U-LOC® flooring uses a drop lock end joint. Simply drop one end over the adjacent end and they fall into place. Proceed with the subsequent boards in similar manner to complete the row. All joints shall have a tight fit. Leave an appropriate gap between the wall and the flooring for expansion.

Solid Sawn®, Northern Solid Sawn® & U-LOC®

Step #3 - To lay the last row, boards must be at least $1\ 1/2"$ wide to attach properly, don't forget the expansion gap. Moldings shall be fastened to the adjacent wall by nail or screw, not the floor, overlapping the expansion gap allowance. If the molding is attached to the floor, the floor will be pinched and will not expand and contract as it is made to perform.

Pinch points from fastened moldings, heavy weight from kitchen islands, cabinetry, piano's etc... will restrict required movement of the floating floor. This will cause tension on the joints and can lead to separation and squeaks. Consult your hardwood flooring specialist on the home's specific application.

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