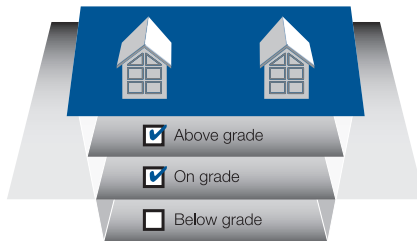




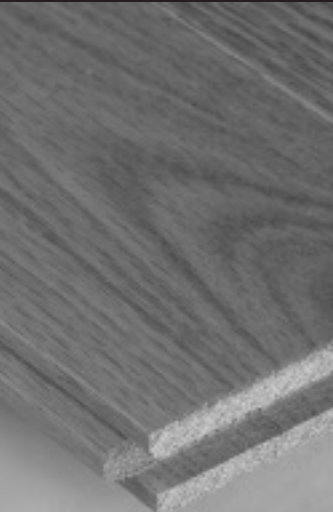
Please read all instructions carefully before installation. Improper installation may void the warranty.



Installation Guide

Solid Prefinished Hardwood Floors

VERSION FRANÇAISE AU VERSO



PRODUCT USE

Mirage Classic products can be installed on and above grade. They may be nailed down with cleats or staples over wooden subfloor, using specially designed hardwood floor nailer.

A solid hardwood floor can be installed over a concrete subfloor on or above grade as long as a layer of plywood is placed over the concrete. A vapor barrier should be used to protect the wood flooring against excessive humidity so that moisture transfer is no more than 3 lbs / 1000 sq. ft. / 24 hours and subfloor moisture is less than 12%.

Mirage **does not recommend installation** of Classic Collection floor over radiant-heated subfloor; it is advisable to install Engineered Collection hardwood floor, which is specially designed for this type of application.

INSTALLER AND OWNER RESPONSIBILITY

Hardwood is a natural material that may reveal imperfections. Mirage prefinished hardwood floors are manufactured to meet the highest quality standards of the industry, which permit a **defect tolerance and grading variance not to exceed 5%**. The defects may be of manufacturing or natural type.

For the manufacturer of Mirage prefinished hardwood floors, Boa-Franc, G.P., hereafter called "Boa-Franc", no effort is spared to ensure that the product is free of manufacturing defects and following strict guidelines, each wood board is individually and meticulously inspected to select the right pieces belonging to the grade being produced. Prior to installation, installer must make sure that every subfloor inspection and pre-installation requirement listed in this guide is satisfactorily met or even exceeds minimal specifications.

Final grade, manufacturing, finish quality check and approval of product before installation remains the sole and joint responsibility of owner and installer, even if owner is absent at time of installation. Installer must exercise sound judgment [common sense] before and during installation; boards showing any glaring defects or imperfections must be trimmed and used in hidden places or not used at all. **Once installed, any board is considered as having been accepted by installer and owner.**

When ordering hardwood flooring, it is recommended to **add 3 to 5% [5 to 8 % for 4-1/4" [108 mm] width planks] to the square footage needed** as allowance for cutting waste and color grade variation, according to type and place of installation.

When in doubt, installer should not install any board showing visible grade, manufacturing or glaring defects, if unable to use in hidden places or trim imperfection. If any installed board must be replaced at a later date, **Boa-Franc's liability shall be solely limited to the replacement of defective products [materials only] in excess of the 5%** industry accepted norm, excluding trimming waste allowance. Boa-Franc shall not in any case be liable for installer's lack of judgment, quality of installation, labor and installation costs.

WARRANTY PROGRAM SUMMARY

The Residential Warranty Program is effective on all Mirage Classic prefinished hardwood floors manufactured after October 5, 1998.

Structural lifetime warranty

Boa-Franc warrants to the original purchaser its Mirage prefinished hardwood floors against any manufacturing defects caused by improper milling, grading, staining, and polyurethane finish. Structural lifetime warranty means the hardwood flooring product will remain free from defects in milling and dimension.

Boa-Franc warrants to the original purchaser its Mirage prefinished hardwood floors in normal environmental conditions, as suggested in the present guide.

Normal environmental conditions mean that heating and ventilation systems should be designed to maintain interior relative humidity level [in the air] between 40 to 50% RH, to ensure the best performance of the Mirage hardwood flooring.

Whenever this warranty is applicable, Boa-Franc's liability is limited to replacing, or repairing, at the option of Boa-Franc, the defective boards due to manufacturing defects in excess of five percent [5%], industry standard, material only. Damage due to improper transportation, storage, installation, extreme indoor conditions [extreme heat, dryness or moisture], extreme sunlight, poor workmanship by installer, bumps and/or dimples illusion created by nailing machine and cleats or staples, or any other cause are not covered. Exposure to excessive heat, dryness or moisture may cause damage to the flooring. It is natural, due to the inherent properties of wood, that some minor contraction and expansion might occur. These occurrences and/or visual changes on the hardwood floor will self-correct with seasonal climate changes and/or when maintaining suggested normal environmental conditions.

Finish warranty

Boa-Franc warrants, to the original purchaser, that the surface finish on its Mirage prefinished hardwood floor **will not wear through** or separate from the wood for a period of:

- **Twenty-five [25] years** from the date of purchase, when used under normal **residential traffic conditions**, or
- **Three [3] years** from the date of purchase, when used under **light commercial conditions**, such as business offices, clothing and/or toy stores [or any non-food service stores] in shopping malls, for all products manufactured after August 5, 2002.

Finish warranty excludes any indentations, scratches or surface damage caused by lack of proper maintenance, misuse, negligence, accidents, spiked-heeled shoes, water, wet mopping, erosion, pebbles, sand, other abrasives, insufficient prevention and/or protection. The surface wear must be readily visible and cover at least ten percent [10%] of the surface area. Gloss reduction is not considered surface wear.

The use of floor care products other than those especially formulated for use on Mirage prefinished flooring may damage your floor and void the warranty.

These warranties apply on the condition that installation and regular and preventive maintenance have been carried out as recommended in this guide and in the Mirage Maintenance & Warranty Guide.

If you need to file a claim under the Warranty Program, contact your Mirage Authorized dealer where the original purchase was made. If your Authorized dealer is unable to answer your claim, then contact us in writing at the following address:

Boa-Franc, G.P., Technical Service Department
1255, 98th Street, Saint-Georges [Quebec] Canada G5Y 8J5
Tel.: 418-227-1181 – 800-463-1303 – Fax: 418-227-9360

Or by e-mail: technical@boa-franc.com

**FLOOR CARE PREVENTION TIPS**

1. Sweep or vacuum regularly to rid your floor of dust and eliminate abrasives that can scratch the finish.
2. Quickly wipe spills from floor to protect wood from excess liquid.
3. Use mats outside and inside entrances to prevent sand and abrasives build-up on floor. Avoid rubber or other dense mat backings that prevent airflow beneath rugs and retain abrasives and humidity.
4. Use mats near sink, dishwasher and workstations to protect floor from cooking utensils, water spills, detergents, oils and other kitchen mishaps.
5. Stick felt pads under any furniture or chair legs to ease movement and prevent scratches. Keep pads clean at all times and regularly check for signs of wear.
6. Opt for large soft polyurethane or rubber casters rather than narrow rigid plastic ones.
7. **Protect your floor when moving heavy objects. Place on a reversed mat, a smaller piece of plywood. Place objects on this and slide smoothly over floor.**
8. Be careful with pointed objects such as spiked-heeled and sport shoes that may damage the finish of your floor, especially if they are worn or damaged.
9. Although Mirage applies UV protection on some natural species in order to reduce the yellowing effects of aging, flooring must be protected from intense sunlight and strong artificial lighting to reduce discoloration. Some yellowing is a natural aging process of wood flooring. The paler the wood, the more pronounced the color change will be.
10. Do not use wax, oil-based detergents or other household cleaning agents on your floors, since these products may dull or damage finish, leave a greasy film that makes floors slippery, make maintenance more difficult and refinishing impossible without in-depth sanding and complete recoating.

For additional information, contact your Mirage Authorized dealer for a free copy of our Mirage Maintenance & Warranty Guide or visit our Website at www.miragefloors.com.





RECOMMENDED TOOLS, MATERIAL AND ACCESSORIES

- Vacuum cleaner or broom
- Scraper
- Leveling bar
- Level
- Leveling compound [optional]
- #20 grit sand paper [optional]
- Wood and/or concrete moisture meter
- Miter saw
- Handsaw
- Claw hammer
- Nail punch
- Pry bar
- Square 16" x 24"
- Measuring tape
- Chalk line
- Reversing tongues [optional]
- *Mirage Touch* [touch up kit]
- *Mirage Clean* [maintenance kit]

Nailed down installation

- Recommended nailers and stapler:
 - **Primatech 800-363-1962 www.primatech.ca**
P210 pneumatic with 1-1/2" [38 mm] nails
H300 manual with 1-3/4" [44 mm] nails
H330 manual with 1-1/2" [38 mm] up to 2" [50 mm] nails
 - **Pownail 800-323-1653 www.pownail.com**
445 pneumatic with 1-3/4" [44 mm] nails
45 manual with 2" [50 mm] nails
 - **Bostitch 800-556-6696 www.bostitch.com**
MIIIFN pneumatic with 1-1/2" [38 mm] nails
MFN 200 manual with 2" [50 mm] nails
MIIIFS pneumatic stapler with 1-1/2" [38 mm] up to 2" [50 mm] staples
 - **Senco 800-543-4596 www.senco.com**
SHF50 pneumatic with 1-1/2" [38 mm] nails
SHF15 manual with 1-3/4" [44 mm] nails
SHF10 manual with 2" [50 mm] nails
- Power drill and 3/32" [2 mm] bit.
- Finishing nails 2-1/2" [63 mm].
- Flooring screws.
- #15 black felt paper [or equivalent].

Prefinished accessories such as reducers, stair nosing, etc. are available from your Mirage Authorized dealer.

Note: Boa-Franc cannot be held responsible for any floor damage resulting from use of inadequate tools.



Nailed down

HANDLING AND ACCLIMATIZATION

Prefinished hardwood floor installation **requires a little more time and precaution than unfinished flooring**; handle with care to avoid board surface and finish damage.

PRE-INSTALLATION CHECKLIST

Basic requirements

- Hardwood floor installation should be the very last step of any construction or renovation project.
- Prior to installation, heating system must be in operation, and room temperature must have been maintained at ± 72 °F [± 22 °C] for at least one week.
- To avoid any moisture-related damages, subfloor must be dry and basement well ventilated.
- **Relative humidity must be maintained around 45%** [between 40 and 50%] at all times.

Subfloor moisture level check

Wooden subfloor moisture reading must not exceed 12% and differential between boards and subfloor must be less than 4%. Wood moisture meters are available from your Mirage Authorized dealer. If moisture reading is too high, postpone installation, find moisture source and correct it if needed, raise heat and increase ventilation until proper conditions are met.

Acclimatization: The wood must be kept indoors at the recommended temperature and humidity level for a minimum of 24 hours prior to installation. This allows the wood to acclimatize to the recommended indoor conditions.

Owner and installer are solely and jointly responsible for pre-installation subfloor moisture level check and must ensure that all conditions and/or specifications listed in this guide have been thoroughly met prior to installation of hardwood floor.

SUBFLOOR PREPARATION

- Installation requires minimum 5/8" [16 mm] plywood, or 3/4" [19 mm] approved OSB chipboard subfloor, if installed over 16" [400 mm] center-to-center joist sub-structure.
- **Sound:** Wooden subfloor must be securely screwed down to joists to prevent any movement or squeaks. Thoroughly inspect and replace existing floor or subfloor that shows evidence of water damage or structural weakness.
- **Flat:** Subfloor surface must be flat and maximum tolerance is 3/16" [5 mm] per 10' [3 m]. If necessary, flatten down any irregularities, using #20 grit paper, and fill any uneven spots with leveling compound.
- **Dry:** Subfloor must be dry and within moisture reading specs.
- **Clean:** Vacuum and free subfloor from any debris or obstacles such as cleats, nail heads, dried glue or any other material.

PREPARATION

- Sketch installation to avoid surprises.
 - Decide starting point or wall.
 - Decide layout angle; 90 or 45° installation to joists is recommended.
- Remove any baseboard, doorsill and old floor covering if necessary.
- Trim bottom of the doorstop with handsaw to insert boards underneath.
- Lay felt paper [or equivalent] on the entire floor surface.
- To enhance the floor's look, lay out the floor boards throughout the room in the same way they will be installed in order to ensure a good mix of colors and nuances of tone. Remove or relocate any boards you do not want. Start by selecting the boards that will best go with the transition moldings.

NAILED DOWN INSTALLATION INSTRUCTIONS [Illustration #1 and #2]**Step I: Starting point**

- Using a chalk line, trace guideline **A** parallel to starting wall and perpendicular to adjacent one. To trace guideline, add 3/4" [19 mm] to board width to account for expansion gap **B** and board tongue. For example, if installing 2-1/4" [57 mm] boards, trace guideline at 3" [76 mm] from starting wall.

Step II: Board laying

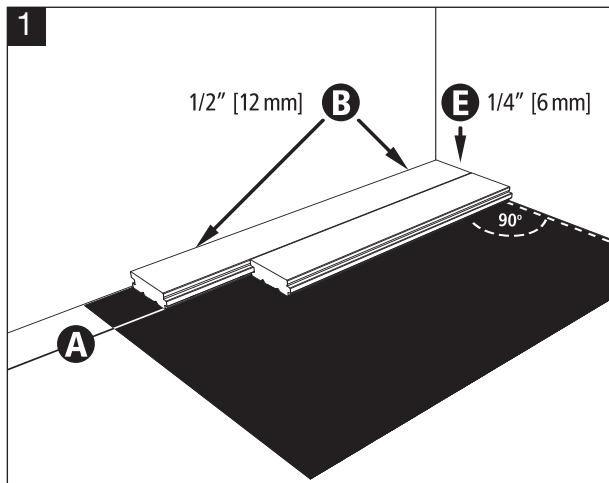
- It is very important that installation be started straight and square.
- Carefully select boards, remove imperfections and save boards with high color variation for hidden places.
- Align first board tongue side with starting line **A**, grooved side facing starting wall; leave 1/4" [6 mm] gap from right side wall **E** which is perpendicular to starting line. Drill and nail board vertically **C** as close to wall as possible to hide nail heads when baseboards and quarter rounds **D** are in place. Install subsequent boards from right to left until ready to trim row end board.
- To minimize trim waste, select board long enough for row end, so that remaining trimmed end may be used to start subsequent row. Leave 1/4" [6 mm] gap at end of each row **E**.
- First board of second row must be at least 6" [150 mm] shorter or longer than that of first row. Cross joints must be staggered by at least 6" [150 mm] from one row to the next. Avoid lining the joints up or having them follow too regular a pattern [illustration #3].
- Since wall proximity prohibits use of nailer, use finishing nails approximately every 4" [100 mm] alongside tongue **F** for first few rows, and punch nail heads down.
- Subsequent rows must be installed the same way, using the nailer [see nailer tips at side]; nail or staple boards every 8 to 10" [200 to 250 mm], but at least 3" [75 mm] from each board end.
- Because of wall proximity, installation of last 4 or 5 rows is identical to installation of first few rows. You might have to rip-saw last row of boards to leave required 1/2" [12 mm] gap **B** alongside finishing wall.

Note:

- Extremely precise board milling may require use of tapping block for better tongue and groove fit.

Step III: Accessories installation

- If applicable, install transition moldings, stair nosings and reducers.
- If applicable, reinstall baseboards and quarter rounds, making sure to nail them only to walls and not to floor [to allow free floor movement].

**Step IV: Post-installation**

- Set a few boards aside in case of future repairs.
- When installation is completed, vacuum floor thoroughly, spray light mist of *Mirage Clean* on terry cloth mop and clean floor.

NAILER TIPS**Warning**

To avoid damaging boards during installation:

- Ensure that nailer base plate remains clean and free from nicks at all times.
- When nailer is not being used, place on piece of plywood or cardboard, but never directly onto floor.
- Ensure that nailer base sits flat on floor and plumb against tongue before nailing board down.
- Check base plate condition and proper operation of nailer regularly.**

Manual nailer

- Hold nailer firmly in place and hit nailer head with rubber mallet.
- Before starting installation, test and become familiar with nailer operation, even if a few boards must be sacrificed.
- Nailing power is much more effective when nailer is used from a standing position.

Pneumatic nailer

- Set and check air pressure regularly, keeping in mind that different hardwood species or subfloor types require specific air pressure settings.

