

Floating Floor Options

Edge-glued and glueless flooring performs well over slabs and radiant heating



Figure 1. Plastic laminate flooring has a composite core capped with a high-density plastic laminate that simulates wood grain, stone, or tile (below); wood veneer flooring is built up in layers, like plywood, and capped with a solid wood veneer (above).

Traditional hardwood strip flooring has long been a staple of residential construction, but sanding and sealing the floor on site is messy and inconvenient. While prefinished strip flooring eliminates the need for on-site finishing, contractors looking for less labor-intensive alternatives are increasingly turning to “floating” floor systems. Designed to be laid over a vapor barrier and a thin foam pad, the planks or tiles of a floating floor are edge-glued to each other without the need for fasteners (see chart).

by JLC Staff

Two types. Most floating floors are either wood veneer or plastic laminate (see Figure 1). Like plywood, wood veneer flooring is built up out of several core layers, topped with a prefinished hardwood face veneer. Plastic laminate flooring has a composite core milled with tongue-and-groove edges, and topped with a layer of high-density plastic laminate similar to but thinner than that used on countertops. The decorative laminate most often simulates wood grain, but is also available to imitate tile or stone.

Installation of plastic laminate and most wood veneer flooring typically requires edge-gluing using special clamps and spacers (see “Installing



SPECIALTY TOOLS FOR FLOATING FLOORS

With any flooring installation, the right tools can make all the difference. ProPac Floor Systems (8663 Date Rd., Bridgman, MI 49106; 888/977-6722) has developed four tools designed to solve common floating floor installation problems:

Bottle Stabilizer Donut. You won't think you need one till the first time you knock over the glue bottle.

Micro Adjustable Spacer. This simple device is said to work better than shims to keep starter courses aligned. The nylon swivel head won't mar finishes and won't get caught in the drywall gap at the bottom of the wall. The spacer is small enough to fit under radiators and cabinet toe-kicks.

ProTapper. Designed for one-hand operation, this tool takes the place of a hammer and tap block. The high-density end blocks can be pushed or pulled against the butt edge of flooring planks by sliding the weighted grip along the tubular rail.

ProPacker Floor Clamp. With a clamping range from 10 inches to 24 feet, this strap clamp can apply continuous pressure to all joints in all but the largest rooms. The strap spools smoothly off the aluminum reel on edge, so it picks up less squeeze-out from a freshly glued joint. Winding the handle in a clockwise motion increases tension; pushing down locks the handle into one of the perimeter holes, pushing down in the opposite direction unlocks and releases more strap.



The tools are sold separately or as a ProKit, which for \$657 includes six clamps, six spacers, and one tapper and donut, plus a softside carry bag. The price may be hard to justify for the occasional job, but these tools could pay for themselves fairly quickly if you install floating floors regularly.



Strap clamps, a tapper tool, spacers, and a glue bottle stabilizer (left) in a soft-sided bag (above) make up the ProKit of tools for floating floor installation.

Laminate Floors,” 2/98). While these accessories are usually available through the manufacturer, ProPac Floor Systems makes a complete set of tools specially designed for floating floor installation (see “Specialty Tools”).

Glueless floors. Installation of the only solid-sawn floating floor system, made by Junckers, requires no glue — the planks are held together with metal clips (Figure 2). In addition, two laminate flooring lines (made by BHK and Norske Skog) use interlocking planks designed to be installed without glue. Glueless floors are popular in Europe, where people sometimes take their finish floors with them when they move, but no-glue flooring also saves time in permanent installations by eliminating the need for clamping. Repairs are much easier, too, since the floor can be disassembled to the point of damage, then reassembled.

Look and feel. Properly installed, a floating floor is practically indistinguishable from a conventional wood floor. However, some clients may be dissatisfied with the way the foam underlayment compresses slightly under the weight of foot traffic, and may claim that a floating floor sounds hollow or doesn’t feel solid. As a precaution, make sure your client has an opportunity to walk on a sample floating floor.

It’s also important for clients to see more than a small material sample. With both wood and laminate flooring, manufacturers may visually divide wider planks into as many as three “strips” (Figure 3). People accustomed to traditional strip flooring may not like the appearance of two- and three-strip plank designs, which create more conspicuous joints where planks butt.

Pros and Cons

Besides offering a wide variety of surface patterns, floating floor systems have distinct advantages over conventional strip flooring.

Stability. Both wood veneer and plastic laminate flooring are more stable than solid-sawn strip flooring, so they expand and contract less with seasonal changes. More important, any movement is more uniform, board to board, which keeps cracks from



Figure 2. The Junckers solid-sawn flooring system is fastened with metal clips (left). Norske Skog’s Alloc flooring (above), uses an interlocking edge to hold planks together.



Figure 3. Single-strip patterns, such as the antique heart pine shown at far left, most closely approximate the look of real wood planks. Some people may object to two- and three-strip patterns, however, because the butt joints are more conspicuous (left).

Wood Veneer

| Manufacturer | Boen Hardwood Flooring Martinsville, VA 540/638-3700 www.boen.com | Harris-Tarkett Johnson City, TN 800/842-7816 www.harris-tarkett.com | The Joinery Tarboro, NC 800/726-7463 www.joinery.com | Kahrs Intl. San Mateo, CA 650/341-8400 ext. 306 www.kahrs.com | Nordstar Hardwood Flooring Gray, TN 888/385-4545 www.nordstar.net | PGM Products Haddon Heights, NJ 800/752-1478 www.pgmproducts.com | SwedeCo Wood Floors Seattle, WA 888/356-6711 www.swedeco.com |
|---|--|--|---|--|--|---|---|
| Type | wood veneer | wood veneer | wood veneer | wood veneer | wood veneer | wood veneer | wood veneer |
| Size in inches (thickness x width x length) | $5/8 \times 51/2 \times 865/8$ | $9/16 \times 71/2 \times 951/2$ | $9/16 \times 31/2$ to $61/2 \times 865/8$ | $5/8 \times 77/8 \times 953/8$ | $5/16$ or $3/8 \times 77/8$ x up to $703/4$ (random lengths) | $7/16 \times 71/2 \times 72$ | $9/16 \times 3, 53/4$, or $71/2 \times 713/4$ |
| Patterns | single-/multi-strip, parquet | multi-strip only | single-/multi-strip | single-/multi-strip, parquet | multi-strip only | multi-strip only | single-/multi-strip |
| Cost/sq. ft (materials only) | \$4 - \$10 | \$5 - \$7 | \$5 - \$8 | \$6 - \$11 | \$2.70 - \$4 | \$4 - \$4.20 | \$6 |
| OK for full baths? | No | No | Yes | No | No | No | No |
| OK to damp mop? | Yes | No (vacuum & proprietary cleaner only) | No (spray and wipe only) | Yes | Yes | Yes | Yes |
| Max temperature over radiant heat | 90°F | 80°F | No | 81°F | 80°F (if pipes covered by concrete or 1/8-inch below subfloor) | 85°F | 85°F |
| Proprietary underlayment required? | No | Yes | No | Yes | No | No | No |
| OK over carpet? | No | Yes | No | No | Yes | Yes | No |
| Notes | Exotic wood species available for face veneers. | New aluminum-oxide finish is said to be more durable. | Antique reclaimed woods available for face veneers. | Exotic and "distinctive" wood species used for top face veneers. | All top veneers are sawn, not rotary cut. | Only one style available. | |

Plastic Laminate

| Manufacturer | Armstrong World Industries Lancaster, PA 800/233-3823 www.armstrongfloors.com | Congoleum Corp. Mercerville, NJ 800/234-8811 www.congoleum.com | Formica Corp. Cincinnati, OH 800/367-6422 www.formica.com | Pergo Raleigh, NC 800/337-3746 www.pergo.com | Pickering Tacoma, WA 800/742-5210 www.pickering.com | Wilsonart Int. Temple, TX 800/710-8846 www.wilsonart.com |
|---|--|---|---|---|--|--|
| Type | plastic laminate | plastic laminate | plastic laminate | plastic laminate | plastic laminate | plastic laminate |
| Size in inches (thickness x width x length) | $9/32 \times 71/2 \times 505/8$ (planks) $9/32 \times 15 \times 15$ or $255/16$ (tiles) | $9/32 \times 75/8 \times 509/16$ | $5/16 \times 8 \times 48$ (planks); $5/16 \times 24 \times 24$ (tiles) | $5/16$ or $7/16 \times 77/8 \times 471/4$ | $5/16 \times 73/4 \times 461/2$ (planks) $5/16 \times 151/2 \times 151/2$ (tiles) | $5/16 \times 73/4 \times 461/2$ (planks) $5/16 \times 151/2 \times 151/2$ (tiles) |
| Patterns | single-/multi-strip, parquet, tile | single-/multi-strip | single-/multi-strip, parquet, tile | single-/multi-strip, parquet, tile | single-/multi-strip, parquet, tile | single-/multi-strip, parquet, tile |
| Cost/sq. ft (materials only) | \$1.75 - \$3.30 | \$2.50 - \$4 | \$4 - \$5 (planks) \$4.25 - \$5.50 (tiles) | \$4 | \$3.50 - \$4.75 | \$3 - \$4.50 |
| OK for full baths? | Yes | Yes | Yes | Yes | Yes | Yes |
| OK to damp mop? | Yes | Yes | Yes | Yes | Yes | Yes |
| Max temperature over radiant heat | 85°F | 80°F | 80°F | 80°F | 85°F | 85°F |
| Proprietary underlayment required? | Yes | No | Yes | Yes | No | No |
| OK over carpet? | Yes | No | Yes | No | Yes | Yes |
| Notes | | Evermore line has a double tongue and groove. | | | | Deeper tongue and groove reduces glue squeeze-out. |

Wood Veneer & Plastic Laminate

| Manufacturer | Bruce Hardwood Floors Bruce Laminate Floors Dallas, TX 800/722-4647 www.brucehardwoodfloors.com | Mannington Resilient Floors Salem, NJ 800/356-6787 www.mannington.com |
|--|--|---|
| Type | wood veneer & plastic laminate | wood veneer & plastic laminate |
| Size in inches (thickness x width x length) | $\frac{5}{16} \times \frac{7^5}{8} \times 50^5/8$ or $\frac{9}{32} \times \frac{7^{11}}{16} \times 50^{11}/16$ (laminate) $\frac{1}{2} \times \frac{7^{11}}{16}$, $\frac{7^3}{32}$ or $\frac{6^1}{8} \times 86^5/8$ (veneer) | $\frac{5}{16} \times \frac{7^5}{8} \times 50^5/8$ (laminate) $\frac{3}{8}$, $\frac{9}{16}$, or $\frac{1}{2} \times 2^1/4$, 3, 5, or 7 x 12 - 42 (veneer - random lengths) |
| Patterns | single-/multi-strip, tile | single-/multi-strip, tile |
| Cost/sq. ft (materials only) | \$4.25 - \$8 (veneer) \$2.50 - \$5 (laminate) | \$4 - 6 (veneer) \$3.50 - \$4.50 (laminate) |
| OK for full baths? | No | Yes |
| OK to damp mop? | No (proprietary cleaner only) | Yes |
| Max temperature over radiant heat | 85°F | 90°F (laminate) 100°F (veneer) |
| Proprietary underlayment required? | Yes | Yes |
| OK over carpet? | No | No |
| Notes | | Best installation manual of the bunch. |

No-Glue (Veneer, Laminate, & Solid-Sawn)

| Manufacturer | BHK of America Central Valley, NY 800/663-4176 www.bhkofamerica.com | Norske Skog — Alloc Flooring Racine, WI 888/673-8724 www.norskeskogflooring.com | Junckers Hardwood Anaheim, CA 800/878-9663 www.junckersh hardwood.com |
|--|--|--|--|
| Type | plastic laminate | wood veneer & plastic laminate | solid-sawn |
| Size in inches (thickness x width x length) | plastic laminate only: $\frac{5}{16} \times \frac{7^1}{2} \times 47^1/4$ (planks) $\frac{5}{16} \times \frac{7^1}{2} \times 7^1/2$ (tiles) | $\frac{5}{16} \times \frac{7^1}{2} \times 47^1/4$ (laminate) $\frac{9}{16} \times 8^1/8 \times 82^1/4$ (veneer) | $\frac{9}{16}$, $\frac{3}{4}$, or $\frac{7}{8} \times 5$ or 6 x random lengths |
| Patterns | single-/multi-strip, tile | single-/multi-strip | single-/multi-strip |
| Cost/sq. ft (materials only) | \$4 - \$4.50 | \$4.30 - \$5.75 (veneer) \$3.75 (laminate) | approx. \$6 |
| OK for full baths? | No | No | Yes |
| OK to damp mop? | Yes | Yes | No |
| Max temperature over radiant heat | 85°F | 80°F (laminate) 78°F (veneer) | 85°F |
| Proprietary underlayment required? | Yes | No | No |
| OK over carpet? | Yes | No | Yes |
| Notes | UniClic product line uses interlock at edges, does not require glue. | Plastic laminate line requires no glue; has felt paper adhered to the bottom. | Only solid-sawn floating floor; installs using metal clips, no glue. |

developing in the edge-glued joints. Most wood veneer or plastic laminate flooring is also rated for use over radiant heating, although manufacturers recommend the same precautions be taken as for solid-sawn flooring (see "Hardwood Flooring Over Radiant," 9/98).

Neither material, however, is impervious to moisture and should always be installed over a vapor barrier. In addition, most wood veneer manufacturers do not warrant their products in fulls bath or other locations where puddled surface water may seep through joints in the floor and cause swelling or delamination. A few even prohibit damp mopping or require use of a proprietary cleaner. The reverse is true of plastic laminate flooring, most of which is approved for use in kitchens and baths. In full baths, however, some laminate manufacturers require sealing of the flooring edges at the room perimeter and at penetrations, often with a proprietary sealant.

Cost. Where prep work can be reduced, floating floors are without question the least expensive option. On a concrete slab, for example, laying strip flooring requires additional materials and labor to prepare a subfloor (see "Installing Hardwood Strip Flooring," 3/99), whereas a floating floor needs just a vapor barrier and a foam pad. The same holds true for floors laid over radiant heating systems embedded in light-weight concrete. A floating floor can also save demolition and disposal costs, as when planks are laid directly over short-fiber carpeting.

In general, material costs for plastic laminate flooring are competitive with traditional hardwood strip flooring. While wood veneer flooring is slightly more expensive, the cost begins to even out with the more exotic wood species. A species that would be prohibitively expensive if purchased as solid-sawn strip flooring is much more affordable as wood veneer flooring because the face layer is only about $\frac{1}{8}$ -inch thick.

Unlike solid-sawn floors, which can be sanded and refinished four times or more, longevity of floating floors is more difficult to measure. While wood veneer floors will outlive their owners, the relatively thin face veneer can only be refinished once, possibly twice. Plastic laminate, on the other hand, can't be refinished at all; it can, however, be completely replaced for about twice what it would cost to sand and finish a wood floor.

