

Manufactured

Railing Systems

Options for factory-made railings are as plentiful as those for decking

BY JEFFERSON KOLLE

It used to be that most pressure-treated decks were surrounded by pressured-treated railings nailed together almost as an afterthought. Serviceable and cost-effective, these railings looked OK until they went through a few seasons in the weather, after which they'd look more like a hog fence than the crown on your beautiful outdoor space.

Pressure-treated decking and railings are still the most popular, but the incredible array of engineered deck boards that have hit the market in the last few decades has brought with it elaborate railing systems made from the same materials by the same manufacturers. These engineered railing systems include rails, balusters, posts or post sleeves, and assorted accessories.

The initial beauty of these systems is that they match the decking product you've chosen. They also share the same low-maintenance characteristics, which you'll appreciate if you've ever spent a Saturday scrubbing and sealing a 100-ft. run of pressure-treated balusters and rails. Yet another plus is that the manufacturers of these

railing systems have already contracted third-party testing facilities to get their products code-approved. (Avoid any railing-system company that hasn't done this.)

Components for railing systems are packaged by type—you order just what you need in the way of rails, post components, and balusters. Most systems include the requisite fasteners, and all include installation instructions ranging in quality from a single sheet to printed pamphlets and online videos. None of the railing systems discussed here are that complicated to install, but there is a learning curve. After a little practice, though, you should be able to install a complete 6-ft.-long system in under 30 minutes. Sure, armed with a chopbox and pneumatic gun, you could possibly smack together a similar length of pressure-treated railing in a little less time, but consider the aesthetics of the final result.

Jefferson Kolle is a freelance writer living in Bethel, Conn. Photos courtesy of the manufacturers.

A WEALTH OF OPTIONS

Engineered railing systems are available in the same materials as engineered decking—metal (generally aluminum), vinyl, composites, and capped composites—and all have their advantages in terms of cost, appearance, and maintenance. Vinyl railing systems are lightweight, but colors are usually limited to lighter hues. While vinyl is generally the least expensive of the engineered materials, vinyl railings still cost more than simple, site-built wood railings. Aluminum railings are available in a wide variety of colors, but they cost more than vinyl. Also, while their powder-coated surfaces are tough, site-cut edges can corrode in salty environments. (Unlike paints that adhere to a surface, powder coats are applied electrostatically, then heat cured.) Heavy composite railings—made from a fusion of wood fiber and plastic—come in deep, rich colors, but they've been outshined lately by the current darlings of the deck-board business: capped composites. The most expensive railings out there, these have an outer layer of a vinyl-like material that can be embossed and striated with wood-grain patterns.

Following is a sample of manufactured railing systems currently on the market. Costs given are approximate and, unless otherwise noted, are based on a 6-ft. long, 3-ft. tall section that includes top and bottom rails, two post sleeves or deck-mounted posts when available, collars, caps, and square balusters.

METAL



AFCO-Rail
afco-ind.com

AFCO's low-cost Series 100 aluminum-railing system has the same durable powder-coated finish as its high-priced rails. Rails are available in 36-in. and 42-in. heights and in 48-in. to 120-in. lengths. Support blocks under the bottom rails are required for lengths over 72 in.

The Series 100 rail sections can be mounted post to post or with special 1 $\frac{7}{8}$ -in. square posts and rails that mount over the posts for a continuous handrail. Post sleeves are 4x4 or 6x6, and $\frac{3}{4}$ -in. square and round balusters are available. Rails are equipped with spaced baluster-mounting connectors. Tapping the balusters with a rubber hammer fits them into the connectors. Surface-mount posts bolt through decking and site-installed 2x blocking.



COLORS Gloss finishes: White, Clay (beige), and Wicker (light beige). Textured finishes: white, black, bronze, and brown.

ACCESSORIES Welded gates, 3 ft. wide and 36 in. or 42 in. tall with hardware; matching aluminum post wraps to conceal tall underdeck supports; ADA-compliant handrails

ASSEMBLY INSTRUCTIONS Illustrated and available at afco-ind.com

COST \$200



COMPOSITES

LATITUDES INTREPID

latitudesdeck.com

Intrepid is the brand name for the substantial railing system that matches Latitudes composite deck boards. There are two rail choices: a plain 2x4 style and an elaborate molded rail. Each top and bottom rail has two pieces: an inner rail that's screwed to the balusters and the post bracket, and a finish top and bottom rail that covers the brackets. The order in which you assemble the rails, brackets, and balusters is not necessarily intuitive; you'll want to spend some time with the instructions before you begin.

Support blocks under the bottom rail are required every 2 ft. Balusters are available for 36-in.- and 42-in.-high railings, which are available only in 6-ft. lengths.



COLORS Walnut, Cedar, Gray, and Redwood

ACCESSORIES Seven baluster options in glass, metal, or composite materials; 15 different post caps, some with integral lighting; ADA-compliant handrails

ASSEMBLY INSTRUCTIONS Text-heavy instructions are at latitudes.com, and an admittedly "abbreviated" installation video on YouTube cautions viewers to read the printed instructions "so the installation is proper."

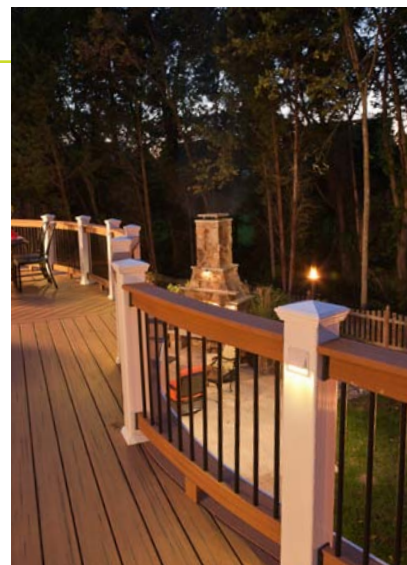
COST \$205

MOISTURESHIELD

moistureshield.com

Unlike most decking and railing companies, Moistureshield doesn't offer a wide variety of balusters, molded rails, and hidden brackets. Instead, its composite railings are straightforward and rectilinear, with the exception of a simple profile molded into the post collars and caps.

Assembling the railings is similar to putting together a simple site-built wood railing, except that all the parts are made from Moistureshield's composite lumber. Identical top and bottom L-shaped rails, available in 6-ft. lengths, are attached to the 4x4 posts with 2¼-in. #7 stainless-steel finish screws, and the posts are through-bolted and blocked to the deck framing. Square balusters are attached between the rails with similar screws. Nothing fancy, but it's a simple, elegant look.



COLORS Standard colors: Bridle (light brown), Cape Cod Gray, Earthtone (gray brown), Rustic Cedar (burnt ocre), Seasoned Mahogany. Premium colors have embossed wood grain patterns: Desert Sand (light grayish-brown), TigerWood (chocolate brown with darker grain patterns), and Walnut.

ACCESSORIES None

ASSEMBLY INSTRUCTIONS Illustrated and available at moistureshield.com

COST \$250 (standard colors) or \$330 (premium colors)

TREX TRANSCEND trex.com

Trex's top-of-the-line Transcend decking is a capped composite material. Its Transcend railing system, however, is made from a composite with no vinyl-like covering. The rails use a unique mortised baluster collar that snaps into a channel in the top and bottom rails and that fits tight around the balusters and spaces them evenly. The collar also covers the post-to-rail brackets, making for a clean-looking joint.

There are three options for top rails, two for bottom rails, and three for balusters. Post sleeves are 4x4; for a beefier look, Trex also has a 6x6 post sleeve that's shimmed to fit directly over a 4x4 wood post.



COLORS Trex has the dubious distinction of adopting the most cryptic names for color choices: Vintage Lantern (dark brown), Classic White, Fire Pit (rust), Gravel Path (gray), Rope Swing (beige), Tree House (medium brown), and Charcoal Black.

ASSEMBLY INSTRUCTIONS

For installation videos, search "railing" on TheTrexCo YouTube channel. Instructions in PDF form are at trex.com.

ACCESSORIES Dimmable LED lighting for post caps and stairs (can be used with other railing systems as well); ADA-compliant handrails

COST \$162 (white) or \$216 (all other colors)

How to choose

Any contractor you hire will probably have a preferred railing system, either because of previous experience with a product or its local availability. If you're installing the railings yourself, you might be inclined simply to choose the company that made the decking you used. But if that manufacturer's railing system doesn't appeal to you, look elsewhere. Here are a few tips to help you make the right choice.

Appearance: You'll spend a lot of time looking at the railing, even in the winter when you're inside your house. Saving a few bucks won't make an ugly railing beautiful.

Availability: Most lumberyards and home centers display only a few railing styles and brands—and they have fewer, if any, in stock. Before you order, pin down your retailer about actual delivery times. Check out local deck suppliers as well as online retailers. The cost of shipping may be offset by sales-tax savings.

Installation instructions: None of the railings are difficult to install, but detailed instructions, and especially online videos, can help you avoid the pitfalls.

Code approval: Make sure that any railing system you consider is code compliant, and then call your local building department to get its OK, too. The building department is the final arbiter.

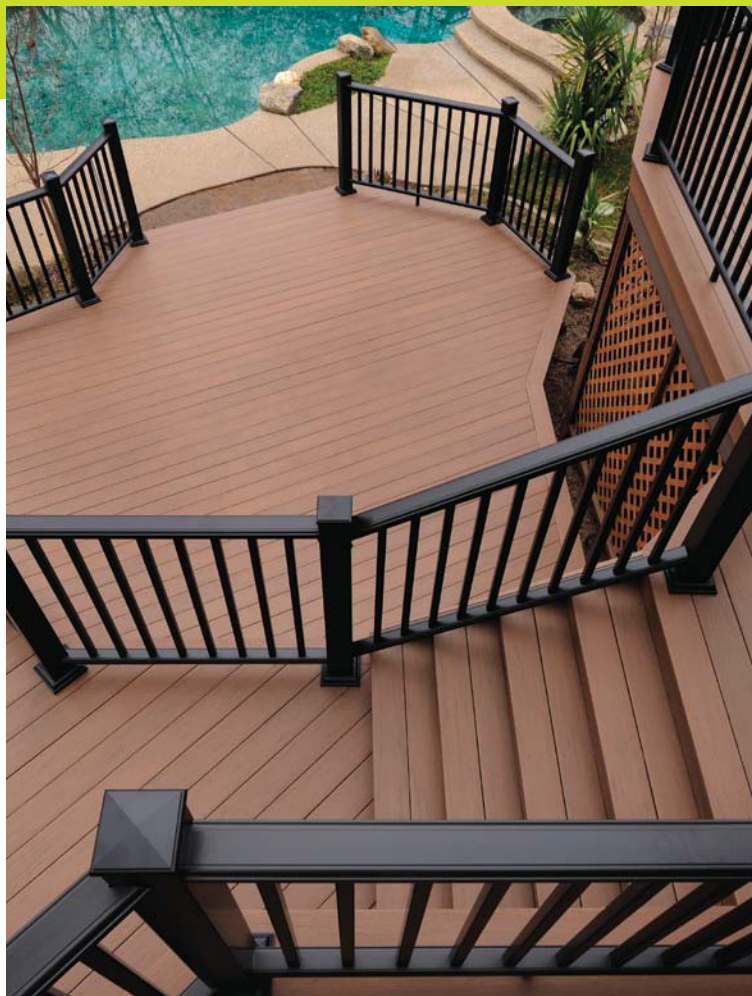
CAPSTOCK

AZEK AND TIMBERTECH
azek.com, timbertech.com

CPG Building Products owns both Azek and TimberTech and has recently made adjustments to both railing systems, making them more compatible, especially with regard to installation hardware.

Both Azek Premier and TimberTech Evolutions railings are made from composite material with an outer layer of scratch-resistant polymers. Premier railings use a single-piece bottom rail and a two-piece top rail that includes a retaining rail through which balusters are fastened and a wider finish rail that covers the fasteners. A 10-ft.-long rail is available, but only in black and white. Surface-mount posts and 4x4, 5x5, and 6x6 post sleeves are available as are post collars and four different post caps, two of which have LED lights. Square composite and square or round metal balusters are offered in four lengths: 29 in., 31 in., 35 in., and 37 in.

Instead of using post caps, TimberTech Evolutions' flat top rails are installed over the tops of the posts. Rails are available in 8-ft. lengths. For longer runs, the rails are butted together at a post. A spokesman for TimberTech said that a biscuit could be used at the joint for registering purposes. Surface-mount and 4x4 post sleeves are available in 36-in. and 42-in. lengths. Square composite and square or round aluminum balusters are also available.



COLORS Azek Premier: Brownstone (milk chocolate), Clay (beige), Slate Gray, Kona (dark brown), Black, and White. TimberTech Evolutions: Black, Walnut, and Brick.

ACCESSORIES Azek Premier: LED cap lights, gate hardware kit, cable-rail kit, ADA-compliant handrails. TimberTech Premier: post-mounted LED lights and ADA-compliant handrails.

ASSEMBLY INSTRUCTIONS Azek Premier: text and video at azek.com. TimberTech Evolutions: text and video at timbertech.com.

COST Azek Premier: \$276. TimberTech Evolutions: \$265 (no caps needed).

FIBERON PROVINCIAL fiberondecking.com

Fiberon's Provincial railing system is made from a composite material topped with a PVC layer. The Provincial's top and bottom rails, available in 6-ft. and 8-ft. lengths, have deep moldings and look like a traditional interior handrail. Only 36-in.-tall railings are available. Square composite and round black-metal balusters are available as well as acrylic panels

that are either clear or tinted bronze. The hollow square and round balusters are held in place with push-on connectors that mount in holes in the rails. Fiberon calls the connectors "daggers," and they can be rotated so that square balusters can be mounted in a diamond pattern rather than with their faces parallel to the rail length. Post sleeves slip over 4x4 posts and use a collar to cover the gap between the post bottom and the decking. Posts that mount to concrete, deck framing, and the deck surface are available. Surface-mounted deck posts require the area under the decking to be reinforced with double 2x8 blocking fastened to the joists. The bottoms of the posts are then through-bolted to the decking and blocking.



COLORS White

ACCESSORIES

LED post caps and side-of-post lights; marine-grade hardware; ADA-compliant handrails

ASSEMBLY INSTRUCTIONS

Written and illustrated instructions and videos at fiberon.com

COST \$210

Mix and match components

Railing-system manufacturers package the components of their products in separate boxes, and there are a couple of reasons for this. You may want to buy light-brown rails and black post sleeves, for instance. Or you may like the matching rails and posts from a certain manufacturer, but not its balusters. Or maybe you want safety-glass panels between your rails, but your rail company doesn't offer that option.

Fortunately, it's possible to mix and match balusters and rails from different companies. Still, before you assume that the 1-in.-sq. balusters from one company fit the 1-in.-sq. mortises in another company's rails, check the exact specifications, or do a little hands-on research at your supplier. You don't want to have to do on-site modifications on a deck-rail section that was supposed to go together in less than 30 minutes.

Some companies specialize in balusters for use in other rail systems or in site-built wood rails. Deckorators (deckorators.com) sells a huge variety of balusters, and Feeney (feeneyinc.com) offers horizontal stainless-steel baluster systems.

Along with making sure that the balusters and rails fit together, check for code compliance when you mix parts. You don't want your rails to pass only to have your balusters flunk.

VINYL

FAIRWAY MASTERS RAILING SYSTEM

fairwaybp.com

Fairway Building Products makes many styles of railing in composites and vinyl. Its Masters vinyl rail is considerably larger than other rails and has a grand, formal appearance. The system is comprised of aluminum-reinforced 6½-in.-wide top and bottom rails with a heavily molded profile. Two balusters are offered—a 2⅝-in. square and a 3¾ in. with a lathe-turned profile. Post sleeves (8 in. sq.) are available with flat sides or with a recessed-panel profile. The post sleeves can be used over 4x4 or 6x6 wood posts; the instructions show a simple way to build out the post to accommodate the large sleeves. Fairway also sells code-complaint steel posts that can be used on concrete or, when used with a special bracket, bolted to a wood deck frame. Rails are available in 4-ft., 6-ft., 8-ft., 10-ft., and 12-ft. lengths and heights of 36 in. or 42 in. Brackets are available for 22.5° and 45° rail-to-post intersections.



COLORS White

ACCESSORIES Brackets for mounting Masters railings to Fairway's 8-in. or 10-in. round porch columns; ADA-compliant handrails

ASSEMBLY INSTRUCTIONS Two pages, available at fairwaybp.com

COST \$1036 (recessed-panel post sleeves and 3¾-in. turned balusters)

CERTAINTEED OXFORD

certainteed.com

The Oxford vinyl-railing system uses aluminum-reinforced rails and offers two different rail-to-post connections depending on whether you use your own 4x4 wood posts and CertainTeed post sleeves, or you use the company's deck-frame-mounted galvanized-steel posts and sleeves. For the steel-post system, posts are bolted to the deck frame. The vinyl post sleeves are mortised to receive the aluminum-reinforced rails that connect to the post inside the post sleeve, providing a completely concealed metal-to-metal connection inside the post (photo right). The post-sleeve system uses brackets to attach rails to posts (photo far left). Rails come in 6-ft., 8-ft., and 10-ft. lengths. Square, colonial-style, and 4-in.-wide tempered-glass balusters are available.



COLORS Almond (beige), Clay (darker beige), and White

ACCESSORIES Gates, available in kits up to 60 in. wide; decorative and solar-powered lighted post caps; ADA-compliant handrails

ASSEMBLY INSTRUCTIONS Thorough instructions at certainteed.com, plus 20 videos at youtube.com/ctfreedomofchoice (look for the "Evernew" tab)

COST \$245