



Railing Manufacturers Want Your Business

by Scott Gibson

In a market dominated by site-built wood railings, makers of manufactured components are looking for an edge

This year, 80% or more of all new residential decks will be rimmed with wood railings hammered together on site by the same carpenters who built the deck. Manufactured railings made of vinyl, metal, wood-plastic composites, and other materials will still be playing catch-up, but it's not for lack of trying.

Decking manufacturers have broadened their railing lines, simplified rail systems to benefit builders and distributors, created interactive websites to attract consumers, and looked for ways to extend interior design preferences to the outdoors. In other words, it's a full-court press to pick up new business.

Wood railings dominate the market in part because they're so much less expen-

sive—composite railing systems can easily cost \$35 a lineal foot, cable systems much more, compared with less than \$10 a foot for standard wood rails. But manufacturers think more homeowners will be won over in the years ahead by low maintenance, long warranties, and the aesthetic benefits of railings that match or complement deck boards.

Deck builders also stand to gain. "Everybody benefits if they can capture the total sale," says Mitch Cox, a partner at Principia Consulting, a building materials research and consulting firm. "The contractor, by selling decking and railing as a system, as opposed to individual components, tends to do a better job and make more money on the job

than one who focuses on just deck boards and throws up a rail system. Everyone has caught on to the fact that selling it as a total system, a total package, makes the homeowner a lot happier and, frankly, there's more money involved in pushing it that way."

Think of Railing Up Front

The long list of alternatives to pressure-treated-pine decking—capped and uncapped composites, vinyl, aluminum, tropical hardwoods, even tile—is attractive to homeowners who want their deck to look just as polished as their living room. So it's easy to blow the budget on upscale decking. Not uncommon, says Cox, is a new deck with synthetic

Railing Manufacturers Want Your Business



Trex Transcend composite balusters and rails can be mixed and matched to create different looks and are available in seven colors (trex.com).



Either full glass panels (shown) or individual glass balusters can be used with the Fortress PureView powder-coated-aluminum railing system (fortressrailing.com).



Different top-rail styles are available with the AGS Stainless cable railing system (agsstainless.com).

decking—and a railing made from low-budget pressure-treated pine because there wasn't money left for anything else.

"They get so focused on the decking that lots of times they forget about railing," says Adam Zambanini, vice president of marketing for Trex. "It's our job and it's the job of the contractors to sell that up front in terms of identifying that the railing will be part of the budget. We need to do more education on the benefits of railing."

CPG, the parent company of Azek and TimberTech, relies on contractors

to make the case for a manufactured railing over pressure-treated pine, says Jenna Herron, the company's railing products manager. Print advertising and websites like Houzz can steer a homeowner toward a particular kind of railing—capped wood-plastic composite, for example, or cable or glass. But it's the builder who's more likely to decide on the manufacturer.

Cox puts it this way: "The contractor has a ton of sway with homeowners. When homeowners hire a contractor to do a job, they're essentially buying that

contractor for his expertise, and that includes his knowledge of materials and brands."

What Contractors Need

Builders wrestle with several issues that influence the manufactured railing they're likely to choose: a shortage of skilled labor (at least in some parts of the country); the complexity of some railing systems that makes both ordering and installation a headache; and a dislike of call-backs that diminish a builder's reputation and eat into profits.

Railing Manufacturers Want Your Business

Some manufacturers have tried to simplify the ordering and installation process, which benefits distributors as well as builders. “One of the big problems in railing is the multitude of SKUs,” says Zambanini in reference to the ubiquitous bar codes assigned to every nut and bolt in a rail system. “What Trex is trying to do is simplify the business.” The company is launching an interactive website that will offer a preview of a particular railing and let builders download a bill of materials that matches it. The system, he says, will make price quotes more accurate, speed up ordering, and reduce the amount of material that has to be sent back to the yard after a job.

Fortress Railing, which makes aluminum, iron, glass, and cable systems, is taking the same tack. “Railing can be very complicated for people, for consumers as well as the installers as well as the dealer,” says Fortress marketing manager Kym Dennis. “We’ve tried to simplify, and you’ll see that in a lot of our ‘Railing Simplified’ marketing materials.”

Fortress is pushing its “1-2-3” system, which is based on pre-assembled infill panels, posts and brackets, and, finally, accessories like baluster accents and lighting. The panelized system is a leg up for dealers as well as for builders, says the company’s railing product manager, Jeremy Jordan. “Dealers don’t have to stock a lot of different bits and pieces,” he said, “because the panels include all of that.”

Simple systems are also easier to install, which reduces costs and helps to narrow the price difference with wood. Plus, it helps builders address labor shortages. It’s important to design railing systems that can be installed by one person rather than two, notes CPG’s Herron.

AGS Stainless has taken the make-it-simple approach as far as anyone. The company makes cable, glass, and stainless bar railings in prefabricated sections that are easy to install on site, and its “Design my Rail” app speeds up ordering



Integrated deck lighting is one of the options that can be used to customize TimberTech RadianceRail composite rail kits (timbertech.com).

at building supply dealers. These steps help lower the cost of its high-end railings from \$300 a lineal foot—typical for custom stainless rails—to between \$100 and \$150 a foot for AGS products, according to AGS marketing director Kevin Harris.

“Smart manufacturers are trying to make sure their systems are the easiest to install, less time intensive, while delivering on all the aesthetic benefits,” says Principia’s Cox. “The ones who do that best are the ones who win.”

Products for Every Price Point

According to Principia’s DemandBuilder, an online sales and marketing tool, pressure-treated wood accounted for more than 125 million lineal feet of railing in 2015, about 71% of the total railing market. Add in cedar, redwood, and hardwood, and wood’s market share swells to

about 82% of the 174-million-lineal-foot total. This doesn’t leave a lot of room for everyone else. So, in addition to looking for ways to make builders happy, manufacturers are trying to offer product lines that are broad enough to capture as many potential buyers as possible.

Trex, for example, has developed a “good/better/best” approach and offers two capped-composite and one aluminum railing option, with prices ranging from about \$20 to \$22 per lineal foot to \$36 to \$38 per foot. CPG has eight railing lines between its TimberTech and Azek brands. Fiberon has four lines, including a wood look-alike called Natural, its high-end Symmetry capped composite with rail sections up to 12 feet wide, and Good Life, railing designed specifically for DIYers (it includes sliding collars that hide less-than-perfect cuts).

Railing Manufacturers Want Your Business

And Fortress covers the non-composite market with iron, aluminum, glass, and cable infill.

For buyers—whether builders or homeowners—it adds up to a lot of options, which the industry sees as crucial as railing becomes less of an afterthought and more of a design element in its own right.

“I see railing beginning to come on its own, aesthetically on its own,” says Kym Dennis of Fortress. The industry’s PR blitz will get more buyers thinking about railing, not just decking, she says, and the relatively high-maintenance requirements of wood will eventually chisel away at its dominance.

Millennials, adds Jordan, do not want something they have to spend their weekends taking care of. That may prove to be an important weapon in the price war.

What Builders Make of It

Deck builders, of course, have their own preferences, and they may be less inclined to go with a packaged system than the industry would hope. For example, former Georgia deck-builder-turned-consultant Bobby Parks developed his own railing system that incorporated select grades of pressure-treated pine, aluminum balusters, and a PVC rail cap. He’s also used Fortress rail panels, vinyl post sleeves, and composite post sleeves from both Trex and TimberTech.

Rhode Island builder Mike Guertin isn’t a full-time deck builder, but he seems to have used just about every type of railing product available. “What do I prefer?” he says. “I prefer whatever the customer likes. Whatever their price point is. I’ve used the cheap vinyl. I’ve used pressure treated. I’ve used cable, and I’ve used the expensive stuff. Once I get a sense of what the customer wants, they’re always right. And for the pros, that’s what I think is really going to be the driver.”

For Parks and Guertin, and no doubt many other deck builders, code compliance remains a concern. Manufactured



Fiberon Symmetry composite railings feature hidden mounting hardware and are available with black aluminum balusters (fiberondecking.com).



Feeney offers pre-cut standard cable-rail kits that are trimmed to length on site, both swaged and swageless fittings, custom rail assemblies, installation tools, and accessories (feeneyinc.com).



Wolf Classic series PVC rails are reinforced with aluminum and are compatible with a number of different vinyl, aluminum, and glass baluster options (wolfleader.com).



Shown here is a code-compliant guard-post-connection detail made using Simpson Strong-Tie DTT2Z deck post connectors (strongtie.com).

railing system components are (or should be) engineered to comply with ASTM D7032, but the connection between the guard post and the deck framing is typically a weak link.

The International Residential Code requires the top of the rail be able to resist a single, concentrated load of 200 lb. applied at any point. But, as Simpson Strong-Tie engineer David Finkenbinder explains, this number quickly goes up. Adding in the industry safety margin of 2.5 means that 200 lb. is now 500 lb. If the load is applied in the middle of a run, each of the two adjoining posts picks up half the load—250 lb. each. If the load is applied at the top of one post, it's all transmitted to a single post-framing connection. And because the guard

post is really a 3-foot-long lever, when a force of 500 lb. is applied at the top, the connection at the bottom is under a load of about 1,800 lb., Finkenbinder says. "In a simple bolted connection between a 4x4 post and a rim joist, the post would be ripped out well before the load reaches 500 lb."

This can leave builders in a quandary, particularly when manufacturers don't spell out attachment procedures, and leave it to builders to figure it out for themselves. There are solutions, both with and without metal hardware, and *PDB* has covered this topic before (see "Code-Compliant Guardrail Posts," May/June 2011).

Conscientious builders look for ways to meet code requirements, but they

don't always agree with them. "The reality is if you really think of how a deck is used, short of taking the front line for Alabama and turning them all loose to run into that rail at one time, rail systems with a 4x4 implanted in that deck that are bolted or attached properly and the attachment screws are proper are not going to fail," says Parks. "It would almost be impossible for realistic use of that railing to fail ... Some of the code stuff gets to be insane."

Finkenbinder doesn't agree. "I can understand why that might be the feeling of some folks," he says, "but I feel pretty strongly the code is right on this." ♦

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