SCREENTIGHT.COM

Screen Options for Porches

You can install prefabricated panels or buy the components and assemble the screens on site

by Charles Bickford

As the popularity of outdoor living spaces continues to grow, more and more homeowners are interested in enclosing their new or remodeled porches with screens. For a deck builder, this is a great upsell opportunity, especially with all of the screening and frame options that are now available to make installation easier. Metal screen fabric has largely been replaced by fiberglass or polyester screening, for example, which—in addition to separating humans from various flying or crawling critters—is better able to maintain air circulation, provide good visibility, and even reduce solar gain, if needed. Frames, too, have evolved, and while wood still rules in historic-district renovations, extruded powder-coated aluminum has become the frame material of choice everywhere else.

When it comes time to install the screens, contractors can choose between two basic approaches: Buy the frame stock, splines, and screen fabric, and assemble the panels on the job; or find a fabricator that makes finished panels sized specifically for each job and then ships them directly to the jobsite. There are a few manufacturers with a national marketing and distribution network, but for the most part, suppliers are locally or regionally based and can often offer alternative, viable designs at competitive prices. They can be found on the Web, or in the Yellow Pages.

On-Site Assembly

Marketed to professionals and DIYers alike, screen panels assembled on site from parts are easy to find and relatively inexpensive. One of the advantages of a component system is that the parts can be easily adapted to fit in irregular openings. In addition, there's no lead time, as there would be with prefabricated panels, and there are cost savings in assembling the frames yourself.

Also, keep in mind that most component systems can be installed from the inte-

rior. As long-time Atlanta-area deck contractor Bobby Parks says, "Anytime you're screening an area above the first story, it's much easier to install (and repair or replace) from inside, rather than dealing with ladders from the outside."

Extruded aluminum component systems are typically manufactured with a hollow box form that's meant to be screwed to the existing porch structure. Although the profiles differ, their cross-sections generally range in size between 3/4 inch and 2 inches. (**Figure 1**). Almost all have a spline channel and can be mitered or butted at the corners. Concealed fasteners are usually the way to go, and many companies offer a vinyl cap that snaps over the screws.

One of the largest companies that produces these systems is Screen Tight (screentight.com). It offers three different lines of screens that range in price and appearance, an approach that some smaller, regional companies have repeated. Screen Tight has a wide distribution, thanks to its partnership with the two biggest-box home-improvement chains and many smaller lumberyards, so its products are readily available.

The other major player in the component market is ScreenEze (screeneze.com), which has come up with a unique approach to attaching the screen to the frame. Instead of using a spline, its aluminum frame stock is sold with a tight-fitting PVC cap that serves the same function (**Figure 2**). Once the piece is cut to length and screwed in the opening, the cap is popped off, then used to trap the screen on each of the frame sides. The system can be installed from the exterior or interior, and can support a frame size of up to 150 square feet, without additional cross-bars or supports.

In addition to these two companies, there are a host of smaller companies with regional distribution. Most offer some variation on the theme of screening splined into aluminum frame stock. Some, like Connecticut Screen Works, in Wallingford, Conn., offer a selection of smart, patented designs that hit the low, medium, and high price points of the component market (connscreen.com), but they also offer customers the option of shop-made screen panels.

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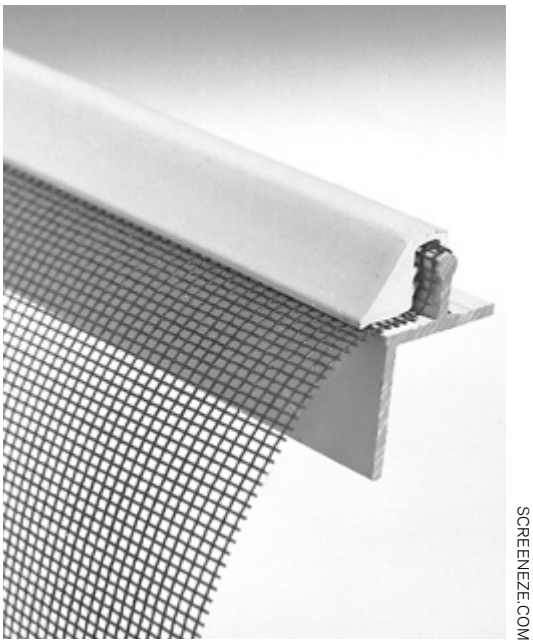
Figure 1. While most screen track is made of extruded aluminum, Screen Tight also offers a UV-protected vinyl profile (top). After the screen has been attached to the base with splines, a removable vinyl cap is snapped onto the base, which evenly tightens the screening (above).



SCREENEZE.COM

Figure 2. Instead of relying on rubber splines, ScreenEze has a vinyl cap that snaps over its 3/4-inch by 3/4-inch aluminum base channel (above). The system has a minimal, unobtrusive profile that fits well with contemporary designs, and can span openings up to 150 square feet (left).

Prefab Panels Are Quick

In the interest of efficient work flow, many deck pros opt to buy manufactured screen panels that can be installed with a minimum of fuss. For simple screen panels, the frames are made of extruded aluminum that typically ranges in cross section from 3/4 inch by 1 1/4 inches to 1 inch by 2 inches. Frames are designed with flanges that fit over an opening or with a simple rectangular profile that registers inside the opening. Screening is splined into the frames by the fabricator (**Figure 3**).

Greg DiBernardo, of Peachtree Decks, in Alpharetta, Ga., uses a local shop to make his panels. "We don't use any of the screen kits that are out there," says DiBernardo, who builds his porch walls with stops and has aluminum-framed custom panels fabricated that are then screwed into those stops. "It's a much cleaner look overall. They aren't that expensive. A typical porch might cost us $500. We get them delivered to the site for $50, and our guys go over and, in less than an hour, screw them in. Our fabricator gets them to us no more than two or three days after we call them in."

For contractors looking to offer a three-season option to their clients, some manufacturers have upped the ante on standard screen panels by adding transparent vinyl panels. Located on the interior, the panels can be raised or lowered like triple-track storm windows. When closed, the 10-mil flexible panels block wind and rain, and can increase solar gain (**Figure 4**).

Terry Jerylo, president of EZ-Screen Porch Windows, in Minneapolis, says "Even in northern Minnesota, the vinyl panels can extend the porch season from 100 days to 300 days." The panels also are more efficient than traditional double-sash windows in allowing air to circulate. PGT Industries' Eze-Breeze systems (pgtezebreeze.com) can be configured in vertical or horizontal panel arrangements that can open up to 75% of the window area when

CONNSCREEN.COM

Figure 3. The aluminum frames for Connecticut Screen Works' commercial-grade panels have a .067-inch wall thickness and a 1-inch by 1 ¾-inch profile. The panels can be ordered in either fully-assembled or KD versions to fit openings as large as 16 feet by 16 feet.

the weather is good. When the weather turns ugly, the panels can be completely closed.

Part-time Screens

A third option for porches is a retractable screen (**Figure 5**). Related to those clever pull-to-the-side retractable screen doors, the screens operate horizontally like venetian blinds, and have weighted lower edges, sill details, and side-tracks to keep the screens insect-proof. They're available in lengths up to 25 feet or more and can be used to reduce solar gain and glare and keep out the majority of wind and rain, in addition to excluding insects at night. When bugs are at bay and the climate is not challenging, a touch of a button activates the screens' motorized transport, which rolls the screen panels up out of sight. (Many companies make manually-operated models as well.)

Going beyond the TV-remote approach, companies like Phantom Screens (phantomscreens.com) and Rainier Industries (rainier.com) offer a decidedly modern take on their systems. Programmable

Screen Options

Metal (especially aluminum) screen dents easily and irreversibly, is more difficult to install, and is available in widths only up to 6 feet. Bronze screen is expensive and causes galvanic reactions with ubiquitous aluminum frames. That's why it's not surprising that lighter and more-flexible synthetic fabric has replaced metal as the screen material of choice. It's woven from one of two types of thread—fiberglass or polyester—both of which are coated with a layer of PVC that strengthens the thread and protects it against damage from ultraviolet light. Both types are available in widths up to 10 feet.

Polyester screen is the newest big deal, mainly because its thread diameters are larger, stronger, and more flexible than fiberglass. It will last up to 10 years, too—longer than fiberglass. According to Jeff Frobose of the Twitchell Corporation, a major screen manufacturer, polyester has a smoother surface that can be coated with a thicker coating of PVC, which in turn is a less favorable environment for mold, which can damage screen threads. Polyester is used to make pet-proof screening that's strong enough to resist paws and claws. It's also woven to create a screen that reduces solar gain by blocking up to 95% of direct sunlight and that will resist both rain and wind. It's the material used to make screens that pass Dade County's stringent hurricane code. When used on retractable screens, some types of polyester screen are tight enough to even allow homeowners to open their porches to the conditioned space of the house without losing too much warm or cool conditioned air.

If all you need is insect screen, fiberglass is sturdy enough to keep out the bugs and still provide maximum light penetration and air circulation. Standard fiberglass insect screen has a mesh count of 20-20 (the tightness of the weave is expressed in the number of threads per square inch, or the mesh count). Though not as effective against the smallest insects, 18-14 mesh count is often used for larger openings that require more strength. The looser weave also offers better transparency.

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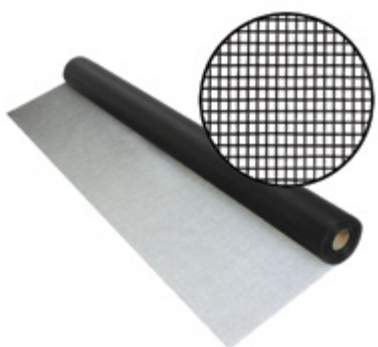

PHANTOMSCREENS.COM

Figure 5. Motorized retractable screens are available with different screen fabric options for insect protection, shade, or privacy. The frames can be surface-mounted or recessed (top), in which case the framing must be planned to accommodate the guide tracks and motor housing (above).

EZPORCH.COM

Figure 4. Screen panel frames made with multi-track extrusions can be fitted with self-storing vinyl window inserts, as well as screens.

sensors that detect sun and wind loads will lower the screens to reduce solar gain and fading due to UV rays, or raise them to prevent damage to the screens due to high winds. By reducing solar gain, the screens can even qualify to earn LEED points in certain areas.

These panels are custom-fit to each opening, a process that often includes mounting the transport system into the head of the opening and even cutting track channels in vertical elements such as columns. Getting the details right can be tricky, so some manufacturers require an approved installer to do the work, while others supply a fairly detailed set of instructions.

Cost

Of the available screen options, the retractable screens are easily the most expensive and can cost as much as $2,500 per panel. Compare that with the cost to purchase the components to screen a basic 4-foot by 8-foot area, where you can expect to pay between $40 to $127 (which includes the screening and frame, but not shipping or installation). Similarly-sized prefabricated panels with vinyl inserts will cost between $350 and $380, not including shipping or installation. ❖

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