

## Super Spacer, for the confidence of a lifetime warranty

It takes a lot of confidence to completely change the direction of an established window manufacturing company. And maybe it takes even more to change from being "low price" to "value added."

That's exactly the path the partners of Win-Dor, Inc. of Anaheim, California, chose for themselves and their company when they cut the cord on their established dealer base after eight years in business and began selling direct in 1999.

"We were tired of 'feeding the beast,' selling on price, making windows just to be making windows," says Gary Templin, who with his partner, Wolf Wirthgen, decided to, "from now on, sell the best windows that we could make." That was a 180 degree turn from their old way of doing business in the super-competitive Southern California replacement window market.

In a way, Win-Dor went back to its roots: direct sales to homeowners. In another sense, the partners were not just changing the way they sold, but their whole manufacturing philosophy. "When we said goodbye to our dealers, we began immediately to look for ways to upgrade our product quality and performance and broaden our decorative options," adds Templin.

"That's why switching to Super Spacer® in 1999 was so important to us. Wolf and I wanted to go forward with a spacer system that would add real value to our windows and doors. That is, one that would give us the confidence to offer a limited lifetime warranty on the



**Win-Dor partners Gary Templin and Wolf Wirthgen at their recently completed Anaheim plant.**

entire product—without fear of seal failures."

From the modest production goal in 1991 of making ten to twelve windows a day, Win-Dor had grown to a 180-per-day producer by 1998. "Obviously, when we made the decision to drop contractor sales in favor of direct sales, our volume dropped significantly in that first year. Since then, over the last four years, our business has grown over 40 percent each year, and we are back to producing 150-180 windows per day," he notes.

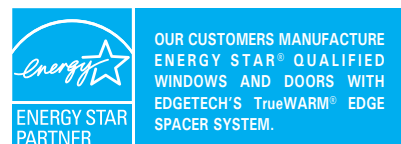
Two years ago, the company moved its manufacturing facility from its 26,000 sq. ft. plant in Orange, California, to a 56,000 sq. ft. Anaheim facility. This year, an additional 18,000 sq. ft. of sales and manufacturing space has been acquired there. Win-Dor today employs more than 200 in Anaheim and sales branches in Riverside, Montclair, Mission Viejo and Seal Beach.

In their quest to offer the best vinyl replacement windows in Southern California, the partners have found success in offering decorative glass options as well as functional ones.

Templin says 40 percent of sales feature grooved glass, and the company offers a wide variety of grid options. Win-Dor now offers Cardinal Glass Industries' low-e glass with easy-clean silicone dioxide coating.

Says Templin, "I can't emphasize enough how much Super Spacer has meant to Win-Dor's rapid growth in the value-added segment of the window market. We chose it because it's the best. It has given us 100 percent confidence that our insulating glass is going to hold up better than other units we sell against. And it makes possible our limited lifetime warranty—a very important marketing edge."

Win-Dor's partners were recently named Small Business Owners of the Year by the Southland Economic Development Corporation.





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### Increasing efficiency and eliminating mistakes through full IG automation

"Empowering the workers" is not a new concept at employee-owned Thermo-Twin Industries, Inc., of Oakmont, Pennsylvania. The company, headed by president and CEO Joseph Palermo, has long valued employees' time as much as the worker-owners value their financial stake in the Pittsburgh area window manufacturer.

"Maximizing productivity is all about increasing worker efficiency and minimizing mistakes," says Palermo, when recently discussing the positive effects of ongoing automation enhancements.

In Fall 2002, Thermo-Twin purchased and installed the new fully-automated Lisec vertical IG manufacturing system for high-speed production of Edgetech's Super Spacer® IG units. Thermo-Twin's TSS® Lisec line features vertical, automatic Super Spacer application as well as automatic gas-filling and



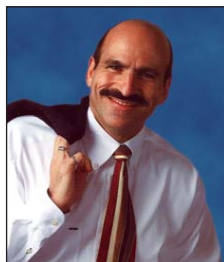
**Thermo-Twin's employees enjoy the benefits of automation.**

automatic secondary sealant application. The system allows for fast, efficient material flow with vertical-to-vertical glass handling while accommodating all of Thermo-Twin's glass size and coating needs.

According to Palermo,

the Lisec line has doubled his company's IG unit output—with half as many workers. "After converting from a semi-automated operation last year," he explains, "we have since been able to run up to 1,000 units in an eight-hour shift, with only two people."

Just as important as increased output is automation's role in eliminating mistakes. Two examples Palermo cites are manufacturing integration



**Joseph Palermo**

software that ties all the processes together and the elimination of human error in critical processes. "For example, the Lisec line's robotic gunner automatically measures the air gap and feeds the correct amount of sealant every time, eliminating waste and preventing mistakes that can lead to problems later."

Now more automated than ever, Thermo-Twin remains primarily a window manufacturer that sells directly to homeowners. But thanks to the resulting gains in automated IG output and efficiency, Thermo-Twin has already seen impressive growth in its secondary business: supplying Super Spacer IG units to other OEM window manufacturers and distributors.

"The high-speed Lisec line," says Palermo, "has allowed us to expand our business on the IG



**Automated Super Spacer Applicator on Thermo-Twin's Lisec Line**

supply side. Today, 50 percent of our business is in IG we sell to outsiders!"

In summary, says Palermo, "Our fully automated IG production and the integrated software frees our people to focus on things that matter most: consistent product quality and the best possible customer service."

"At Thermo-Twin, we produce the finest quality IG systems in high volume by combining Super Spacer with the unmatched efficiency of Lisec integrated automation."



  
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## Edgetech SDL S-sentials system redefines "authentic"

Casey Kirkhoff, owner of Westeck Windows near Vancouver, British Columbia, believes most simulated divided lite systems on the market fall far short of "authentic" true divided lite aesthetics.

"While many architects and others have a nostalgic preference for the look of TDL on traditional homes and buildings, they are hesitant to specify it due to cost and performance issues," explains Kirkhoff. "Simulated Divided Lite (SDL) windows solve the problem of often prohibitive costs and compromised thermal performance - but lack the "authentic" appearance of TDL. Shadows in the glass and internal grids that don't quite fill the air space are common aesthetic compromises in SDL systems."

Westeck is a \$7 million dollar vinyl and wood window manufacturer serving Washington, Oregon and Northern California as well as British Columbia. Last May, the company began using Edgetech Super Spacer, replacing another warm edge spacer in their manufacturing process. At the same time, Edgetech invited them to pioneer a new approach to SDL

grid systems called SDL S-sentials, a thermoset foam sleeve system for standard internal muntins.

Westeck has been fabricating its own "faux TDL" system for some time, but they saw the new Edgetech alternative as thermally and aesthetically superior to what they had been doing.

S-sentials are flexible-foam sleeves that slide onto muntin bars, which are then assembled into internal grids within double-glazed IG units. Exterior muntin profiles are aligned and fixed to the outer surface of each lite, visually linking them with the S-sentials internal grid assembly.

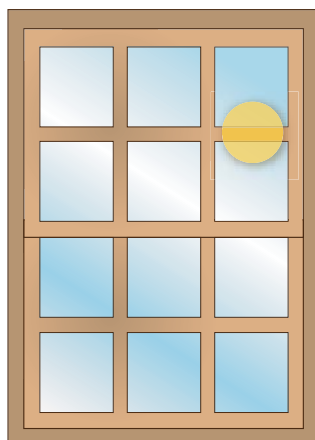
"We had been using our own SDL system in which we attached two internal muntin grids, back to back, with an adhesive. Although the combined bars almost filled the air space and improved the appearance, it was a labor intensive

assembly process. Also, with the hard bar grid almost touching the glass, we experienced some breakage during shipping. That wasn't acceptable," says Kirkhoff.

With the S-sentials system, Westeck wraps a single internal muntin grid with flexible foam sleeves that, when assembled, create a padding that protects the glass when the window is shipped.

"The foam sleeve assembly is much faster and easier than our old SDL process. And, once installed, the S-sentials muntin is visually in harmony with the smooth, crisp lines of Super Spacer," notes Kirkhoff. Westeck continues to apply an external grid system to complete the "authentic" effect.

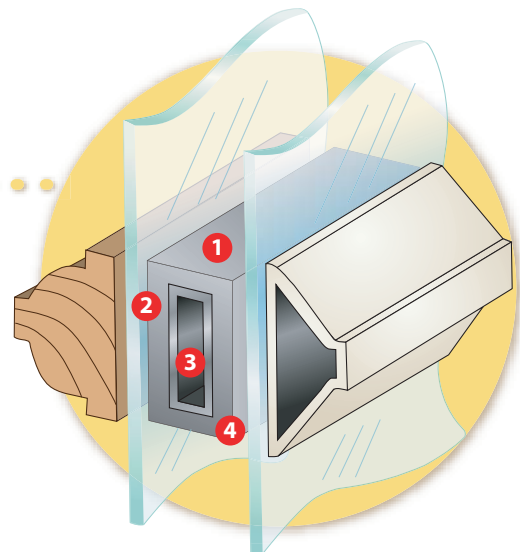
Westeck still offers true divided lite windows, but Kirkhoff is beginning to wonder why. "The wood and vinyl-wood Combo Windows we make using Edgetech's new simulated divided lite system look every bit as good as TDL. Besides," he says, "S-sentials performs far better and costs half the price! Why would anyone want anything else?"



External applied grid lines up with internal grid.

### Simulated Divided Lite (SDL) Window Diagram

- 1 Smooth, non-reflective finish
- 2 Rectangular foam sleeve forms a double thermal break
- 3 Conventional metal muntin bar system
- 4 Soft foam cushions glass interior surfaces



## Subtropical island climate is hardly a breeze for ordinary windows

Most of us can only dream about 4,000 to 11,000 sq. ft. ocean-front mansions in a tropical island setting.

Michael Smith of Bermuda International Trading Company furnishes the windows for such magnificent dream homes, and no ordinary windows are they! Custom made by Atlantic Windows in Port Elgin, New Brunswick, the high-end custom vinyl windows Smith sells to Bermuda builder/architects are constructed to withstand the unique climatic challenges of a subtropical island. Corrosive salt air. Extreme ultraviolet exposure for furnishings. Relative humidity of 90-100 percent. Driving, horizontal rain.



**"Overboard," a 4,000 sq. ft. Bermuda oceanfront home has 56 Atlantic double hung windows, protected by Super Spacer TrueWARM edge technology.**

"Bad things happen to ordinary windows in this climate," says Smith. "Ordinary metal hardware tends to corrode very rapidly in the salt air breeze off the water. Atlantic provides all windows shipped to Bermuda, with stainless steel or other non-magnetic hardware. Anything else would rust." Island customers receive windows with Truth casement hardware; doors, with Hoppe HLS 900 hardware—both in stainless steel.

"Rain doesn't fall straight down in Bermuda," notes Smith. "High winds off the water drive it right



**This sprawling 11,000 sq. ft. mansion, on nearby Agar's Island, features 170 Atlantic fixed and casement windows with Super Spacer. To view additional Atlantic Window projects, visit [www.atlanticwindows.com](http://www.atlanticwindows.com).**

into the house through even the smallest cracks and seams in the doors and windows. Atlantic makes a very tight window using a combination of compression seal and durable brush weather stripping."

The integrity of the insulated glazing system is another priority in tropical environs, just as it is in more frigid ones. The low-e glass Atlantic uses is formulated to block a high percentage of sun-fading ultraviolet rays. And, with some of the highest humidity in North America, protection against seal failure is especially important.

"Before we began our relationship with Atlantic Windows in 1999," explains Smith, "we were using windows with butyl-seal metal spacers and experiencing 75-80 percent seal failures within a few years' time. Since Atlantic introduced us to Super Spacer® NO-metal warm edge technology, we have practically eliminated seal failures, which were once the leading source of customer complaints in this high-humidity environment."

Rob Miller, president of Atlantic Windows, notes that the manufacturer was among the first in Canada to offer a lifetime warranty on sealed IG units. He attributes that to the outstanding reliability of Super Spacer to

virtually eliminate seal failure in any climate.

Atlantic Windows was established in 1983 and has been using Super Spacer since 1994. "In addition to Bermuda, we sell through 150 dealers across the Maritime provinces, including Newfoundland, Nova Scotia, on Prince Edward Island and in Ontario, with some distribution into the U.S. Northeast. Our products are even sold in Iceland, so, as you can see, we've experienced Super Spacer's superiority against condensation in extremely different climates within our marketing area."

The company, which manufactures an average of 600 windows a day with a work force of more than 200, is now expanding its plant from 85,000 sq. ft. to 115,000 sq. ft. Edgetech's Super Spacer has played an important role in the company's growth, according to Miller.

"Super Spacer is a fantastic product that has allowed us to provide all of our customers, regardless of local climate, with service-free windows and doors for the high-end market."

