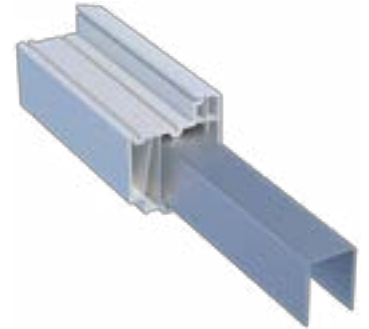


**Steel vs. Aluminum Stiffener** *There are pluses and minuses to both steel and aluminum stiffeners. Here are a few for consideration.*



**5x  
more**

**Energy Efficiency:** *it is important to note that aluminum is roughly 5x more thermally conductive than steel.*

Think of steel spacer vs. aluminum spacer bar. Day in and day out the window or patio door will be more thermally efficient with steel than with aluminum reinforcement.

**3-4x  
KSI**

**Flex modulus:** *The KSI for our steel alloy is 3-4x that of aluminum depending on which grade of steel.* As such, the yield point (point at which the stiffener will deflect) is much higher for steel. We routinely design steel stiffeners to have a yield point that exceeds the desired PG to avert any concern about deflection and shapes taking a set.

**cost  
per  
ft**

**Cost:** *Typically the cost/foot for steel is less than aluminum.*

Start-up costs are higher for steel.

By far, the most prevalent stiffening system for vinyl windows and doors is steel. Quanex offers galvanized steel. It would take significant, long-term exposure to generate corrosion. Quanex Screens and our competitors sell steel patio door screens that are installed in coastal applications every day. The window & patio door stiffener is concealed inside a sonically welded PVC extrusion and, as such, is shielded from the elements. If this is still a concern, we apply a coating at the hardware fabrication point to protect this unsealed area from corrosion.

*In summary, steel is more energy efficient, less expensive, much stronger, and very unlikely to corrode.*

### Quanex houses universal U-channel roll tooling for your stiffener needs.

We have a variety of gauges available in galvanized steel. Engineering support services are available to help you customize rollformed profiles to meet your specific needs, including specialty shapes, sizes and materials.

Additionally, we are able to pre-cut and/or pre-notch your profiles to specified lengths with keen accuracy and the highest attention to quality.



### High-Quality Rollformed Stiffeners



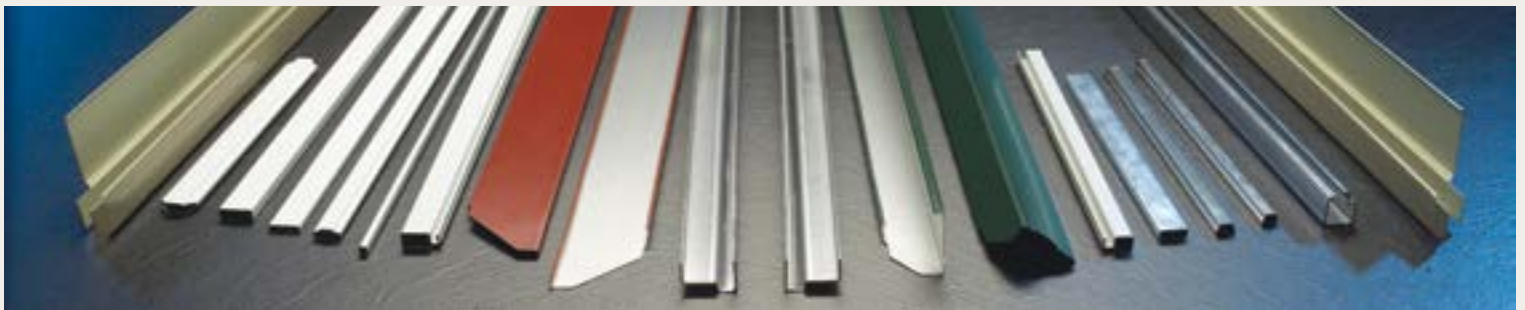
#### Better Performance Compared to Aluminum

- Stronger and more durable
- Less conductive and more thermally efficient

#### More Economical than Aluminum

- Up to 50% less expensive
- Stable material costs help you project expenses

Our experienced rollforming team has delivered high-quality rollformed stiffeners for windows and doors for more than 20 years. Quanex offers a wide variety of rollformed shapes - from stiffener to cladding to screen frame.



### Backed by an Experienced Team

We employ a total quality management system that includes CAD-designed profiles, high-quality steel carbide tooling and precision non-contact measurements.

Our manufacturing processes are linked wherever possible to drive down labor costs and improve efficiencies. These initiatives have resulted in best-in-class quality, lead times and overall service.

### Extremely Versatile

- More than 50 shapes in a variety of gauges
- Mill or galvanized finished
- Lineal or cut-to-length reinforcement with optional hardware punch available
- Also ask about our solid wood core option