



SignMark® Signs



Manufacturing
Responsibly

FRP Flat Sign Panels

Terry Hawkins Industries is an innovator in the development and application of FRP composites to replace traditional materials resulting in products that are more durable, corrosion resistant, have superior strength and are cost effective providing advanced solutions for our customers' product needs."

Fibreglass Reinforced Plastic (or FRP) is the material of choice for harsh environments such as roads and highways where, in comparison to traditional aluminum/steel products, you need signage that :



Is Less Expensive



Is Lighter, the panels by approximately 10% and the posts by 75% or more



Is More Durable, the panels revert to their normal shape under bending. The post is over 20% stronger than an equivalent, by weight, steel post.



Is Corrosion averse, fibreglass does not corrode or rust and is not affected by salt or water, up to 5-10 times longer lasting in very corrosive environments



Has a Lower Maintenance Cost



Is Not an Attractive Target for Thieves.



Is Compatible - Fits the existing 2" x 2" square steel post infrastructure and therefore requires no expensive retrofitting.



THI is committed to Environmental Responsibility using the only resins with Bio-Derived content. THI reuses its own FRP waste and has retrofitted for green heating. THI Manufactures Responsibly continually reducing its carbon footprint.



Tested Extensively in the real-world

Using a patented technology THI's manufacturing facility uses space-age processes to produce a panel that is mirror smooth for excellent decal adhesion. FRP panels can also be pigmented to whatever colour is required.

Panels are available either as precut blanks to DOT specifications or as 4ft x 9ft sheets for cutting and shearing locally. Panels feature slotted fixtures to be compatible with the existing post infrastructure or use the THI FRP pultruded Post (see over) for additional advantages.

THI's panels and posts have been rigourously tested on the roads and highways of Nova Scotia where extreme environmental conditions provide a real world laboratory to ensure the THI SignMark® products meet all requirements of the Department of Transportation.





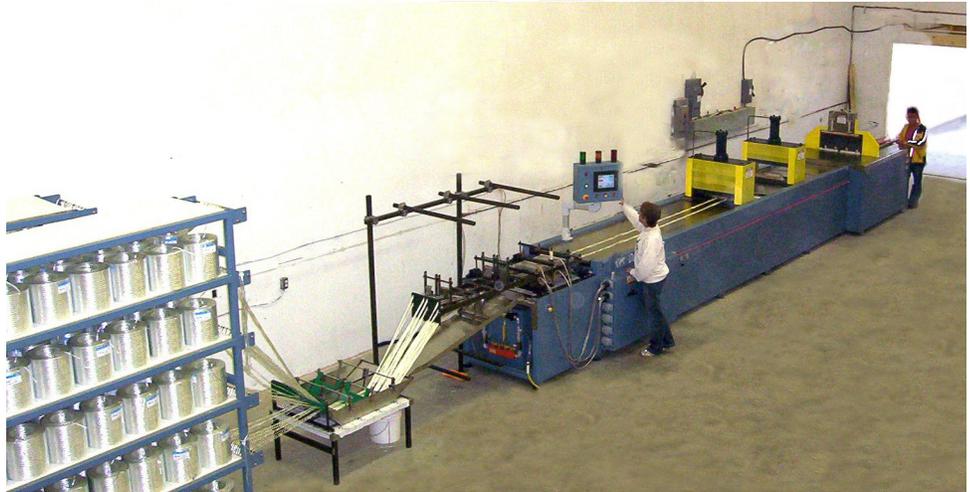
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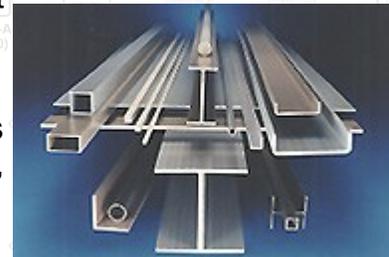
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FRP Posts

THI Sign Posts are made using a process called "Pultrusion" where fibreglass matt and roving are pulled through a bath of catalyzed resin and a die system that forms it into the shape required. THI uses pultrusion systems that can pull at high pressure and can accommodate product profiles of almost any cross section.



The current sign infrastructure uses posts that are 2 inches by 2 inches and the pultrusion system produces these in 2 or more lines through the pultrusion system at the rate of 4 feet per minute minimum. Posts can be produced to any length and standard saws used to cut it to size. The 2 inch by 2 inch profile fits existing post boot infrastructure.



THI's Pultrusion capability, with the addition of new guides and dies, is able to produce any post cross section; square, round and also the overhead multi-panel sign "J" sections.

The advantages of THI FRP Posts over the existing "Telespar" steel posts, apart from the fact that they are approximately 75% lighter and 20% stronger by weight, can be seen overleaf and in the table below.

Material Characteristic	THI Pultrusions	Extruded Aluminum	Steel
Strength to Weight	High	High	High
Thermal Conductivity	Low	High	High
Expansion & Contraction	Low	High	Medium
Corrosion &/or Chemical Resistance	High	Medium	Low
Electrical Conductivity	Low	High	High