

Greenhouse Frame Systems:

The frame system of your greenhouse plays more than just one vital role. Not only does it determine the strength & longevity of your greenhouse, it contributes to its overall efficiency on a much larger scale than most realize.

Steel: There are many Pros & Cons when it comes to steel framing of your greenhouse system. The gauge, the design, & most importantly, the finish. Galvanized steel is one of the absolute worst materials your greenhouse can have for its framing system. Steel is one of the fast conductors in thermal transference of any building material. While galvanized may hold some appeal to its non-corrosive nature, the energy sacrifices made outweigh any benefits. Galvanized Steel will not only have severe negative effects to your greenhouses energy consumption it will decrease the life of your glazing system. It is not uncommon for temperatures of galvanized steel in greenhouse frame applications to exceed 250 degrees Fahrenheit in summer temperatures. This extreme heat radiating not only can cause burns to bare skin, its extreme heat quickly degrades the polycarbonate, polyethylene film, acrylics, and various other types of glazing. Your greenhouses cooling system will always be running to combat this internal "heat" source which decreases efficiency and increases costs.

Is the heat from galvanized steel better for winter months though?

Yes, & no. The consequences of a galvanized steel frame far outweigh any temporary benefits.

What are AWG Incs' Standard Frame?:

Our Standard Frame Systems are fully welded 11ga & 14ga Steel. Dual coated with our proprietary cool metal gray primer. Our specialized coating is

specifically engineered to reduce the heat & cold retained by the steel. This coating makes the steel "safe to touch" in the hot summer months & does not decrease the life of the glazing system. Our frame systems are specifically engineered for strength, ease of installation, & longevity. All backed by a 50 year warranty, manufactured in the USA. Engineered to withstand up to 130mph winds & 80lb snowloads in standard designs. Heavier load designs available for environments that require them.

Aluminum:

Aluminum, depending on the extruded design, can be one of the best options for your greenhouse frame system. There are several different alloys commonly used in aluminum manufacturing. Aluminum is designated into "grades". These grades typically define the usage of that aluminum for extrusion purposes. 6061 is the most common. If you are in a saltwater exposed environment, anodized is the key word you'll need to know when it comes to the aluminum you will need.

Rust proof, corrosion resistant, thermally inhibitive, are just some of the positives in an Aluminum frame system. The primary "Con" is the cost, & now with worldwide delays and shortages, delivery delays. The pandemic was just one of the factors in product delay, global instability in the aluminum supply chain is also another key factor. So with delays comes substantial price increases. We have never seen such a large increase in a material so quickly. With a minimum price increase of 62% for some types, to over 1k% increase for others. We also offer specialty anodized coated aluminum frame systems for saltwater exposed applications as well.

At AWG Inc we own the dyes in all of our Aluminum extrusions. Specifically designed for several purposes. Our aluminum components are engineered to outlast, outperform, lighten the load, increase efficiency, and safety. Our super lightweight rolling bench top that is 3x stronger than other top systems used by other manufacturers. Our structural H & J channels are

engineered to seal your polycarbonate systems airtight. Our Multi-Frame Aluminum Frame engineered for multiple panel systems, and much more.

Wood:

What are the pros & cons of framing your greenhouse out of wood?

You will typically only find wood framing in custom residential greenhouses. Wood framing systems degrade quickly due to sun exposure and humidity variances. Typically in greenhouses, you will only find wood being used as based boards in hardening houses(hoop houses). Even in this application, unless the wood is properly treated, the wood will require replacement every couple of years, if not sooner.

When wood is used for any reason in a greenhouse, it is highly advised that the wood be treated properly for longevity. In certain environments, pressure treated wood is a suitable option. In highly arid climates, pressure treated wood can degrade faster than regular building lumber that has been treated with specific sealants.

These are the 3 most common greenhouse framing materials. Some manufacturers offer “snap together” systems, where light gauge aluminum is paired with polycarbonates. These systems are typically only found in small residential applications, and have zero efficiency and little strength to wind and snow loads.