

A Hybrid Approach to Wall Panel Manufacturing

by Ed Heil

Building your system on a versatile software platform will build the capability of your business as well.

Wall panel manufacturing has a limited history in our industry. Today's manufacturers come from widely varied backgrounds—framers, lumber retailers, builders, and component manufacturers, to name just a few. Predictably, each brings different skill sets, production requirements, and business goals to their manufacturing operations.

In this article, I'd like to talk about a comprehensive "systems" approach to wall panel manufacturing that allows users to be financially prudent early in their ventures and still ensure flexibility and potential for future growth. I call this the hybrid approach. In the context of this discussion, a hybrid system is a solution that mixes technologies, carefully coordinating machinery options with a powerful and expandable production software platform (the key component of a manufacturing system). This is a system designed to maximize an operation's chances of success because it accounts for production expectations, available building space, and the workforce's manufacturing expertise. Simply put, hybrid systems are designed to provide maximum flexibility.

Do Your Homework

As with many other businesses, the future of wall panel manufacturing can seem like a moving target. That fact alone makes researching the marketplace and your prospective customers' needs so important before you make any machinery or software investments. Exciting markets are developing all over the country, but best practices in this industry are just beginning to be established. Market forecasts for product demand vary widely, even in the same region, and this factor affects both the short- and long-term viability of wall manufacturing systems. The bottom line? Do your due diligence and purchase wisely!

I believe that the wall component manufacturing market cannot be effectively served by "off the shelf" solutions. There are simply too many variables from company to company. Having owned and operated a truss and panel plant and visited close to 50 additional operations, I've learned that clients and prospects need a wide range of cost effective tools to capitalize on the opportunities presented by the ever-changing wall manufacturing industry. That's why I advocate this approach.

A typical hybrid system includes manual machine technologies, production software, material delivery components, and eventually, automated machine systems. Each system is designed to meet specific, defined challenges presented by an evolving wall component market and to accommodate the widely varied levels of expertise each organization brings to its business.

A hybrid system offers four big advantages over off the shelf systems: It is affordable, expandable, forward-looking, and technology-driven. In my opinion, the key to a healthy return on investment in wall panel manufacturing is striking the proper balance of these characteristics for your needs. Let's take a look at them individually:

Affordability
So why are you in business, anyway? It's likely your overall goal is to achieve a good return on your investment. And ideally, that return should improve over time. So controlling your initial capital investment in a manufacturing plant is critical.

For instance, if your initial machinery investment overwhelms the skills of your workforce, your rate of return will certainly suffer. It's important to realize that your actual rate of return will be directly proportional to your organization's abilities in areas like manufacturing procedures, personnel development, design skill development, and service and maintenance skills. In many companies, such skills are inadequately developed, and it's important to recognize that a machinery investment alone cannot compensate for a lack of technical ability. Therefore, use your organization's collective skill level to help you determine the appropriate choice for machinery investment.

And this is where the hybrid concept really shines. Because it is built on an affordable, flexible software platform, it enables manufacturers to enter the market with a minimal investment in machinery while allowing your team to build the skills necessary to compete, capture greater market share, and as a result, deliver a good return on investment. In other words, it's a simple, scalable "pay-as-you-go" approach.

Expandability

Wall panel manufacturers benefit immensely from the hybrid approach's capacity for expansion and growth. This flexibility is delivered through production software that provides an essential framework for organizational development. An initial investment in production software also enables easy connectivity to higher levels of machinery sophistication in the future.

A sound software investment delivers essentially the same manufacturing functionality and benefits at each level of organizational sophistication. This means it delivers a paperless stream of management and manufacturing instruction regardless of whether the machine operation is either very manual or very automated. So manufacturing personnel trained with this technology are able to operate efficiently whether laying a plate out by hand, for example, or monitoring the performance of a highly automated saw that cuts and marks the plate.

The right software enables a framework from which standard operating procedures and operator skills can fully develop. In this way, a hybrid system investment provides a great degree of flexibility.

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Forward-Looking

Who can predict how wall panel manufacturing technology will develop? The building component industry itself is a recently established, yet burgeoning business. However, no one can determine with absolute confidence whether wall components will become as common as roof components. Therefore, it is difficult to say today which equipment-driven systems will become obsolete or less efficient than others.

Manufacturers who invest in a hybrid system understand that software developments drive our industry and help define its future. When opening a new shop, manufacturers often

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at a glance

- ❑ A hybrid wall panel manufacturing system coordinates machinery options with expandable production software platform.
- ❑ The initial capital investment for wall panel manufacturing equipment is closely tied to your return on investment.
- ❑ The software package available through the hybrid approach offers expandability and works well with automated and manual equipment systems.

A Hybrid Approach...

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wonder whether an operation too small is practical and whether a larger one can still be efficient. By design, a hybrid system is expandable, and can anticipate and accommodate future industry developments. Such carefully considered and powerfully designed software platforms create the most forward-looking systems in the industry.

Technology-Driven

This characteristic is very important because high production settings require highly skilled personnel. And the higher the production rate, the more significant this criterion becomes. This reality runs contrary to the common belief that highly automated facilities can operate with low levels of personnel skill.

Manufacturing walls is not like building typical assembly-line products. Wall designs involve many specialized exceptions. Therefore, it makes sense to develop your organization's collective skills while also ramping up your wall component production rate. It is here, again, where the technologies associated with a hybrid system can help your operation grow. For instance, in a hybrid system, production software provides a paperless interface to production workstations,

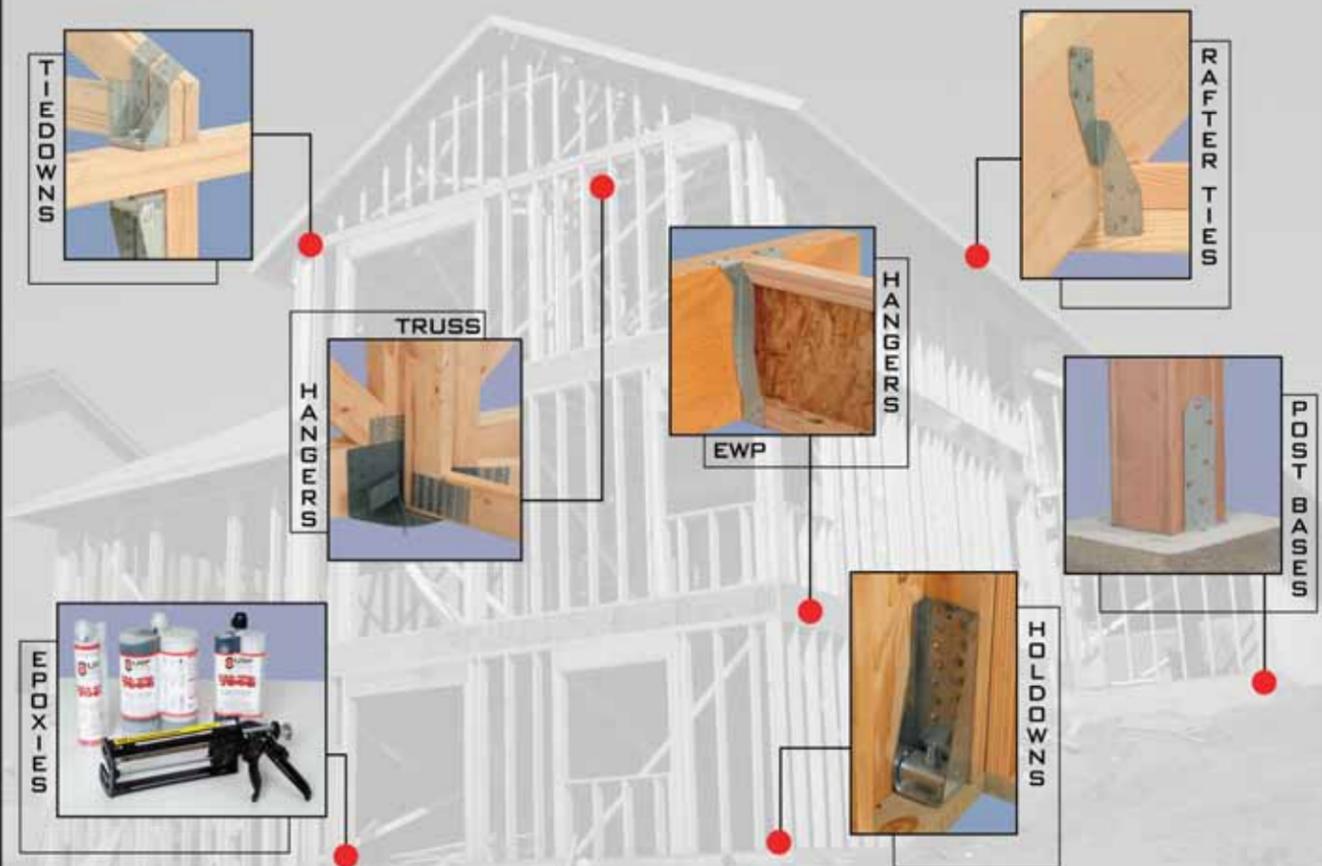
complete with specific personnel work assignments designated by the design office. And even the most basic production software platform also delivers greater material scheduling, handling and material delivery efficiencies.

The overarching goal is to meet changing market opportunities with higher levels of automation when it is strategically wise to do so. More expensive equipment technology becomes an appropriate and attractive investment when it can be carefully justified and implemented.

In summary, I believe that choosing a hybrid approach will enable your organization to enter and compete in the growing manufactured wall panel market at a reasonable cost to enter. When you put powerful, expandable and affordable production software at the core of your business, you ensure you'll be both strategically positioned and agile enough to anticipate, respond to, and capitalize on growth opportunities in this dynamic industry. Good luck! **SBC**

Ed Heil worked as an apprentice on a wall panel line at age 15. He later started a labor-only framing company, which became a national turnkey framer providing material, labor, and engineered products for multi-family framing projects in 15 states. He opened a truss and panel plant in Baltimore in 1989 to service his framing company. Ed joined MiTek in 2003 to oversee wall panel software and machinery development.

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